

DRAFT

**INITIAL STUDY
MITIGATED NEGATIVE DECLARATION**

**MILL CREEK ACQUISITION
LANDSCAPE STABILIZATION AND EROSION PREVENTION
PLAN**

May, 2005



State of California
DEPARTMENT OF PARKS AND RECREATION

MITIGATED NEGATIVE DECLARATION

PROJECT: Mill Creek Acquisition
Landscape Stabilization and Erosion Prevention Plan

LEAD AGENCY: California Department of Parks and Recreation

AVAILABILITY OF DOCUMENTS:

This Initial Study/Mitigated Negative Declaration is available for review at:

California Department of Parks & Recreation
Northern Service Center
One Capitol Mall - Suite 410
Sacramento, California 95814

California Department of Parks & Recreation
North Coast Redwoods District
3431 Fort Avenue
Eureka, California 95503

Del Norte County Library
190 Price Mall
Crescent City, CA 95531

Department of Parks and Recreation website
http://www.parks.ca.gov/default.asp?page_id=981

PLAN DESCRIPTION:

DPR proposes to make the improvements described herein to the Mill Creek Acquisition (MCA) watersheds. The following is a summary of the planned improvements:

1) Full Road Recontouring

The plan will implement road recontouring on approximately 93 miles of abandoned, unstable inner-gorge, mid-slope and ridge top service and skid roads within the Mill Creek Watersheds. The work will include excavation of embankment fill from roads and stabilization of excavated materials on cutbench to fully recontour natural (pre-disturbance) topography. All of the roads proposed for treatment under this plan are currently impassable and could not serve as part of a transportation network.

2) Stream Crossing Removal

The project includes removal of fill material from 351 stream crossings associated with the service and skid roads described above. The majority of the crossings will have no flow during the proposed construction season and are typically small fill crossings. Most of the crossings are already partially removed and many are actively failing. Stream crossing removal will include removal of road and landing fill from stream channels and floodplains. Placing excavated material against nearby road cut slopes and recontouring to match the natural slopes will stabilize the crossings. Stream channel bed, banks, and adjacent slopes will be restored to their pre-crossing configuration. Longitudinal stream gradient will be reestablished through the crossing site.

A copy of the Initial Study is incorporated into this Mitigated Negative Declaration. Questions or comments regarding this Initial Study/Mitigated Negative Declaration may be addressed to:

John E. Harris
California Department of Parks & Recreation
North Coast Redwoods District
P.O. Box 2006
Eureka, CA 95502

Pursuant to Section 21082.1 of the California Environmental Quality Act, the California Department of Parks and Recreation (DPR) has independently reviewed and analyzed the Initial Study and Negative Declaration for the proposed project and finds that these documents reflect the independent judgment of DPR.

Original Signature on File- North Coast Redwoods District Office

John E. Harris
Environmental Coordinator

Date

DPR, as lead agency, also confirms that the project mitigation measures detailed in these documents are feasible and will be implemented as stated in the Negative Declaration.

Original Signature on File- North Coast Redwoods District Office

Steve Horvitz
Superintendent, North Coast Redwoods District

Date

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CHAPTER 1 INTRODUCTION

1.1 INTRODUCTION AND REGULATORY GUIDANCE

The Initial Study/Mitigated Negative Declaration (IS/MND) has been prepared by the California Department of Parks and Recreation (DPR) to evaluate the potential environmental effects of the proposed Landscape Stabilization and Erosion Prevention Plan at the Mill Creek Acquisition (MCA), Del Norte County, California. This document has been prepared in accordance with the California Environmental Quality Act (CEQA), Public Resources Code §21000 *et seq.*, and the State CEQA Guidelines, California Code of Regulations (CCR) §15000 *et seq.*

An Initial Study is conducted by a lead agency to determine if a proposed plan may have a significant effect on the environment [CEQA Guidelines §15063(a)]. If there is substantial evidence that a plan may have a significant effect on the environment, an Environmental Impact Report (EIR) must be prepared, in accordance with CEQA Guidelines §15064(a). However, if the lead agency determines that revisions in the plans or proposals made by or agreed to by the applicant mitigate the potentially significant effects to a less-than-significant level, a Mitigated Negative Declaration (MND) may be prepared instead of an EIR [CEQA Guidelines §15070(b)]. The lead agency prepares a written statement describing the reasons a proposed plan would not have a significant effect on the environment and, therefore, why an EIR need not be prepared. This IS/MND conforms to the content requirements under CEQA Guidelines §15071.

1.2 LEAD AGENCY

The lead agency is the public agency with primary approval authority over the proposed plan. In accordance with CEQA Guidelines §15051(b)(1), "the lead agency will normally be an agency with general governmental powers, such as a city or county, rather than an agency with a single or limited purpose." The lead agency for the proposed project is DPR. The contact person for the lead agency is:

John E. Harris Senior Resource Ecologist North Coast Redwoods District 3431 Fort Avenue Eureka, California 95503 Phone: (707) 445-6547 x-19 Or P.O. Box 2006 Eureka, California 95502	Brian R. Merrill Engineering Geologist Roads, Trails, and Resources Maintenance North Coast Redwoods District 3431 Fort Avenue Eureka, California 95503 Phone: (707) 445-5344 Or P.O. Box 2006 Eureka, California 95502
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1.3 PURPOSE AND DOCUMENT ORGANIZATION

The purpose of this document is to evaluate the potential environmental effects of the proposed Landscape Stabilization and Erosion Prevention Plan in the MCA. Mitigation measures have also been incorporated into the project to eliminate any potentially significant impacts or reduce them to a less-than-significant level.

This document is organized as follows:

Chapter 1 - Introduction

This chapter provides an introduction to the plan and describes the purpose and organization of this document.

Chapter 2 - Plan Description

This chapter describes the reasons for the plan, scope of the plan, and plan objectives.

Chapter 3 - Environmental Setting, Impacts, and Mitigation Measures

This chapter identifies the significance of potential environmental impacts, explains the environmental setting for each environmental issue, and evaluates the potential impacts identified in the CEQA Environmental Checklist. Mitigation measures are incorporated, where appropriate, to reduce potentially significant impacts to a less than significant level.

Chapter 4 – Mandatory Findings of Significance

This chapter identifies and summarizes the overall significance of any potential impacts to the natural and cultural resources, cumulative impacts and impacts to humans, as identified in the Initial Study.

Chapter 5 - Summary of Mitigation Measures

This chapter summarizes the mitigation measures incorporated into the plan as a result of the Initial Study.

Chapter 6 - References

This chapter identifies the references and sources used in the preparation of this IS/MND, and includes a list of report preparers.

1.4 SUMMARY OF FINDINGS

Chapter 3 of this document contains the Environmental Checklist that identifies the potential environmental impacts (by environmental issue) and a brief discussion of each impact resulting from implementation of the proposed plan. Based on the Environmental Checklist and the supporting environmental analysis provided in this document, the proposed Landscape Stabilization and Erosion Prevention Plan at MCA will result in less than significant impacts for the following issues: aesthetics, agricultural resources, air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation/traffic, and utilities and service systems, and cumulative impacts.

In accordance with §15064(f) of the CEQA Guidelines, a MND shall be prepared if the proposed project will not have a significant effect on the environment after the inclusion of mitigation measures in the project. Based on the available project information and the environmental analysis presented in this document, there is no substantial evidence that, after the incorporation of mitigation measures, the proposed project will have a significant effect on the environment. It is proposed that a Mitigated Negative Declaration be adopted in accordance with the CEQA Guidelines.

CHAPTER 2

PROJECT DESCRIPTION

2.1 INTRODUCTION

This Mitigated Negative Declaration evaluates the environmental effects of the proposed Landscape Stabilization and Erosion Prevention Plan. This plan will perform road recontouring of approximately 93 miles of abandoned, unstable inner-gorge service and skid roads within the Mill Creek, Rock Creek, Wilson Creek, Hunter Creek and Turwar Creek Watersheds. The work will include excavation of road embankment fill and stabilization of the excavated materials on the remaining road cut bench. The process is designed to fully recontour the road to match the natural (pre-disturbance) topography. The project will also remove fill material from 351 stream crossings associated with those service and skid roads. Stream crossing removal will include removal of road and landing fill from stream channels and floodplains. During crossing removal, excavated materials are stabilized on the adjacent road cut bench. Stream channel bed, banks, and adjacent slopes will be restored to their pre-crossing configuration and longitudinal stream gradient will be reestablished throughout the crossing site. The project is intended to diminish the impacts of abandoned roads to the natural resources of the MCA and associated watersheds.

2.2 PLAN LOCATION

The Mill Creek Acquisition is part of Del Norte Coast Redwoods State Park and is located in the coastal mountains of northwestern Del Norte County, approximately 5 miles southeast of Crescent City. The plan will incorporate projects spread throughout the 25,000 acre MCA. Highway 101 runs along the western edge of the present park boundary. The MCA is within the North Coast Redwoods District (NCRD) of California State Parks.

The work proposed as part of this plan will take place in Rock Creek and Mill Creek watersheds, which drain into the Smith River; Wilson Creek watershed, which drains into the Pacific Ocean; and Hunter Creek watershed, which drains into the Klamath River. (T 15 N, R 1 W, Section 1; T 15 N, R 1 E Sections 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 35, 36; T 15 N, R 2 E, Sections 7, 18, 19, 30, 31; T 16 N, R 1 W, Section 36; and T 16 N, R 1 E, Sections 26, 27, 28, 29, 31, 32, 33, 34, 35, 36, Humboldt Meridian) USGS 7.5' Child's Hill, CA and Hiouchi, CA quadrangles. Access to the planned project sites from Eureka is via Highway 101 north. The main access to the MCA, Hamilton Road, is located 2 miles north of the Mill Creek Campground on Highway 101. Due to safety concerns, the property is currently accessible to the public only via prior arrangement. The access roads within the park are closed seasonally and may not be drivable during winter due to wet and muddy road surfaces.

2.3 BACKGROUND AND NEED FOR THE PLAN

The extensive network roads in the MCA and its associated watersheds have resulted in concentration of surface runoff and the diversion of streams onto unstable slopes. This concentration of flow has resulted in road failures and unnatural landslides delivering massive volumes of sediment into the adjacent streams. The influx of sediments is known to degrade aquatic habitat and adversely affect water quality. The primary purpose of this plan is to diminish the impacts of sediment delivery from these roads to the aquatic habitat of the MCA.

The road removal sites are completely within an area that was managed for timber production prior to DPR ownership. The sites contain a dense network of haul roads that were abandoned after logging operations ceased in the late 1990's. The sites have numerous unstable stream crossings, many of which have a high diversion potential. Many of the roads are insloped or have berms, which interrupt and concentrate runoff onto slopes prone to landslides. Many gullies and landslides exist that were caused by the road network being proposed for removal. Numerous active landslides intersect the roads and many are located directly upslope from stream channels.

The plan will improve habitat conditions for fish, wildlife, and plant populations. Listed Coho salmon and other salmonids will benefit from a reduction in sediment delivery to spawning and rearing habitat. This plan will improve habitat for Coho and Chinook salmon, and Steelhead by restoring the natural surface

hydrology and eliminating stream diversions and runoff concentrations that cause gullies and landslides. Amphibians will benefit from an increase in suitable habitat, as well as a reduction in sediment delivery to potential habitat. In addition, DPR's goal of restoring natural vegetation patterns and improving conditions for natural slope processes will be aided by re-establishing natural drainage patterns, recontouring of old roadways, and reducing unnatural landslides.

2.4 PLAN OBJECTIVES

The primary objective of the proposed plan is to protect park resources through the use of road recontouring to:

- Eliminate interception and diversion of runoff on the road surface.
- Prevent mass wasting and erosion of road embankment fill.
- Prevent direct sediment delivery to the drainage network from failed embankment fill.
- Prevent runoff diversions that cause severe gullying on roads and slopes.
- Prevent mass movements caused by diverted flow directed onto interfluvial slopes.
- Re-establish the natural landform and original hydrology.
- Eliminate direct linkage between streams and roads.
- Eliminate road surface areas that collect water.
- Improve ecosystem function by eliminating road-associated barriers and fragmentation.

2.5 PLAN DESCRIPTION

DPR proposes to make the improvements described herein to the Rock, Mill, Hunter, and Wilson Creek Watersheds within the MCA. The following is a summary of the planned improvements: The MCA watersheds contain a dense network of over 350 miles of haul roads that were abandoned after logging operations ceased in the late 1990's prior to Park ownership. Road failures and unnatural landslides caused by the diversion of streams and concentration of surface runoff have resulted in the degradation of aquatic habitat for threatened anadromous fish species and sensitive amphibians. In some areas, bank erosion caused by excessive sediment loads has resulted in the toppling of riparian trees. The purpose of this plan is to diminish the impacts of these roads to the natural resources of the State Park system. The following work is proposed as part of this plan:

1. Implement full or partial road recontouring on approximately 93 miles of road.
2. Removal of fill material from 351 stream crossings associated with the service and skid roads.
3. Stabilize approximately 528,000 cubic yards of road and crossing fill that is potentially deliverable to streams if left untreated.

Full Road Recontouring

This plan will perform full road recontouring of approximately 93 miles of abandoned, unstable mid-slope and upper-slope service and skid roads within the Mill, Rock, Hunter, and Wilson Creek Watersheds. The work will include excavation of road embankment fill and stabilization of the excavated materials on the remaining road cut bench. The process is designed to fully recontour the road to match the natural (pre-disturbance) topography. Full recontouring will stabilize approximately 34,000 cubic yards of road fill that is potentially deliverable to streams if left untreated and eliminate runoff diversions along roadways. Full recontouring will also eliminate road surface erosion estimated to yield 154,000 cubic yards over the next 25 years.

Partial Road Recontouring

This project will perform partial road recontouring of approximately 30 miles of abandoned, unstable lower-slope and inner-gorge service and skid roads within the Mill, Rock, Hunter, and Wilson Creek Watersheds. The work will include excavation of a portion of the road embankment fill and stabilization of the excavated materials on the remaining road cut bench. The process is designed to partially recontour the road to match the natural (pre-disturbance) topography while unloading potentially unstable embankment fills. Partial recontouring will stabilize approximately 5,500 cubic yards of road fill that is potentially deliverable to streams if left untreated. Partial recontouring will also eliminate road surface erosion estimated to yield 25,000 cubic yards over the next 25 years.

Stream Crossing Removal

The plan will also remove fill material from 351 stream crossings associated with the haul roads indicated above. The average length of stream channel affected by crossing removal is approximately 100 feet in

length and ranges from 60 to 250 feet. The majority of the crossings are ephemeral and do not flow during the construction season and are typically small fill crossings. Stream crossing removal includes excavation of road and landing fill from road/stream channel crossings and stabilization of excavated materials. Stream channel bed, banks and adjacent slopes will be restored to their pre-disturbance configuration and the longitudinal stream gradient will be reestablished through the crossing site, except where post-logging incision, stream diversion or bank instability requires unique design. The plan will remove approximately 309,000 cubic yards of potentially deliverable sediment from these stream-crossing sites.

See Section 2.6 (Project Implementation) below for details on the actual construction process.

2.6 PROJECT IMPLEMENTATION

The construction window for this project will extend from June 1st to October 15th each year beginning in 2005 and extending through 2010. Up to five crews of three people each, using heavy construction equipment, will perform the proposed work. Individual service vehicles will also be on-site during construction.

Heavy equipment work will utilize a bulldozer (ranging in class from D-6 to D-8), to push fill up steep slopes and shape/finish slopes, and an excavator (ranging in class from 50,000 to 110,000 pounds) to excavate and shape/finish slopes while sitting on steep slopes. A geologist or qualified geology intern, under the supervision of a licensed engineering geologist, will oversee all heavy equipment work for appropriate design and adherence to the methods outlined in the California Salmonid Stream Habitat Restoration Manual (California Dept. of Fish and Game, 2002).

Construction Techniques for Full Road Recontouring:

- The excavator and dozer will work together to prepare the site by first removing all trees and brush growing on the cutbank, roadbed, and embankment. These materials, as mulch, will be stockpiled on the top of the cutbank or below the embankment fill. Mulch may be piled, but will be left accessible to the excavator when earthmoving tasks are complete. Trees growing in undisturbed soil that were partially buried by road embankment fill may be left standing; however, embankment fill will be excavated away from the base. Care will be taken to protect roots. An excavator-mounted vegetation masticator may be used to remove trees and brush. Tree boles will be left at least 24" high for later extraction with the excavator or dozer. If a masticator is used, a dozer may be employed to accumulate and pile ground mulch for use on finished surfaces.
- Following clearing operations, a dozer equipped with rippers will decompact the inboard ditch and cutbench portion of the road, to a minimum depth of 12 inches. The cutbank will be stripped of all organic accumulations, using the dozer or the excavator or a combination of both, except where spring flow or seepage may support aquatic species. Small amounts of organic material, such as small twigs, leaves, and decomposed humus, may be incorporated into the fill material and used to recontour the cutbench.
- If stable areas exist along the road cutbench, the dozer will begin pushing embankment fill into the cutbank in maximum 6-inch lifts. The dozer will continue to push material against the cutbank, compacting it in lifts until the material becomes too steep on which to operate, or no more fill is available locally or site-specific design calls for lesser finished grades. As the dozer cuts into embankment fill, it will leave a berm on the outside edge to prevent material from being sidecast downslope.
- The excavator will follow the dozer and make a pass to remove the berm and what remains of the embankment fill beyond. The excavator could complete the slope match at the top of the cutbank. Where a complete match is not possible due to a deficit of fill material, the excavator will pull down the top corner of the cutbank, up to 6 feet where practical, and blend with the fill below.
- Where recontoured slopes permit, the final surface will be smoothed by back-dragging with the dozer blade, or by sliding the back of the excavator bucket back and forth across the recontoured slope. Trees and brush removed prior to excavation will be raked across the surface with the excavator to remove the equipment tracks, then spread evenly over the surface as mulch.
- Cutbanks exposing seeps or springs will not be recontoured. Instead, the embankment fill adjacent to the wet area will be exported to a nearby dry section of the road. An outsloped cutbench will extend along all wet road sections. All vegetation within 25-feet of the seep or spring will be retained with the exception of any vegetation on the roadbed.

- If a long section of road is not suitable for full recontouring, the excavator will remove the embankment fill and load it into dump trucks to be hauled to a stable location. The excavator and dozer will recover the entire embankment fill and outslope the cutbench of the road. On roads with steep linear grades, broad swales will be constructed along the road at appropriate locations to convey flow into natural drainage features below the road.
- Road sections immediately adjacent to stream crossings will not be fully recontoured. Instead, the fill will be tapered toward the crossing and the exposed cutbank laid-back to a more stable slope. This will reduce the slope on each side of the crossing, lessening the chance for direct sediment delivery if a post-treatment slope failure occurs.

Construction Techniques for Partial Road Recontouring:

- Partial road recontouring follows the same steps as full road recontouring. However, with partial recontouring only the upper portion of the embankment fill will be recovered and backfilled into the cutbank. This reduces the driving force exerted on the embankment fill while accommodating poor conditions along the cutbank such as groundwater or chronic instability. If decayed woody debris is located during the excavation of the embankment, the embankment affected by the weak material will be fully excavated and the fill will be distributed along the road so as not to overload any single location.

Construction Techniques for Stream Crossing Removal:

- The excavator will prepare the site by first removing all trees and brush growing on the cutbank, roadbed, and embankment of the adjacent road sections. Trees and brush growing on the crossing fill upstream sediment wedge will also be removed and used as mulch. Mulch will be stockpiled on the top of the adjacent road cutbanks or elsewhere in the crossing excavation area. Mulch may be stockpiled in piles, but will be left accessible to the excavator when earthmoving tasks are complete. Trees growing in undisturbed soil that were partially buried by fill may be left standing; however, fill will be excavated away from around the base. Care will be taken to protect roots. An excavator-mounted vegetation masticator may be used to remove trees and brush. Tree boles will be left at least 24 inches high for later extraction with the excavator or dozer. If a masticator is used, a dozer may be employed to accumulate and pile ground mulch for use on finished surfaces.
- If the stream has running water capable of transporting sediment, it will be diverted away from excavation areas to reduce turbidity. Where channel widths are wide enough, a berm will be constructed to divert water away from the work area. Where channels are narrow, a small diversion dam will be built upstream and stream flow piped around the worksite and discharged into the stream below the worksite. Instream fabric filters will be installed downstream of crossing sites, where diversion is not possible.
- If the crossing has already partially failed and access is required to the opposite side, a small road bench will be reconstructed along the upstream end of the crossing, to allow access to both sides of the crossing. A minimal amount of fill will be used. Streamflow (if present) will be piped around the site or a culvert will be installed to convey streamflow under the temporary road. Brush mats will be used in dry crossings to convey flow during out-of-season runoff through the temporary crossings.
- Following clearing operations, a dozer equipped with rippers will decompact the inboard ditch and cutbench portion of the adjacent road sections, to a minimum depth of 12 inches. The cutbank will be stripped of all organic accumulations, using the dozer or the excavator or a combination of both. Small organic material will be evenly distributed and incorporated into the fill material and used to recontour the cutbench.
- If stable areas exist along the adjacent road cutbench, the dozer will begin pushing the crossing fill into the cutbank of the adjacent road sections, in maximum 6-inch lifts. The dozer will continue to push material out of the crossing, compacting it in lifts until the material becomes too steep on which to operate; the dozer reaches the local Ordinary High Water elevation; or no more fill is available in the crossing. As the dozer cuts crossing fill, it will leave a berm on the downstream edge to prevent material from being sidecast downslope toward the stream.
- As the dozer begins the crossing excavation, the excavator will position itself at the downstream edge of crossing and begin removing fill and placing it where the bulldozer can push it to the storage area. In crossing excavations where stream flow is present, the excavator will work from the downstream extent of excavation to the upstream extent, to prevent pooling and uncontrolled release of water and sediment. If the adjoining road is not suitable for material storage, the excavator will remove the crossing fill and load it directly into dump trucks; and material will be hauled to a stable location.
- The dozer and excavator will continue to work in tandem until all crossing fill on the adjacent slopes has been removed. The excavation will be designed to match the slopes and banks upstream and

downstream from the crossing. In cases where the failed crossing includes a large inner-gorge gully or has incised below pre-disturbance stream grade, it may be necessary to lay the banks back by digging into non-fill material. The excavator will make final adjustments to the excavated stream crossing. The final surface will be smoothed by back dragging with the dozer or the back of the excavator bucket.

- Trees and brush removed prior to excavation will then be spread over the surface of the side slopes as mulch. Mulch will be preferentially applied to stream crossing sites to reduce the delivery of sediment from surface erosion on crossing sideslopes. Within 50 feet of the stream channel crossing excavation sideslopes will be mulched to provide 80% surface coverage. Within the area between 50 feet and 100 feet of the crossing, mulch will be applied to sideslopes to provide 50% to 70% surface coverage. Road approaches with less than a 50-foot natural buffer to stream channels will be treated with mulch applied to provide 50% to 70% surface coverage. Where the quantity of mulch material is insufficient to meet these requirements, locally derived material will be imported to the crossing sites from nearby interfluvial road sections. Mulch applied at crossings will be pressed onto the ground surface wherever possible using either the excavator or the dozer. Uniform mulch coverage will be accomplished by hand following heavy equipment operations.
- Cutbanks exposing seeps or springs will not be recontoured. Instead, the crossing fill will be exported to a dry section of the road away from stream crossings. An outsloped cutbench will be left adjacent to the stream crossing, if wet areas are present.
- Road sections immediately adjacent to stream crossings will not be fully recontoured. Instead, the embankment fill will be removed and the exposed cutbank will only be partially recontoured. The partial filling against the cutbank will slowly be tapered to full recontour as the equipment moves away from the channel. This will reduce the slope on each side of the crossing, lessening the chance for direct sediment delivery if a post-treatment slope failure occurs.

2.7 VISITATION TO THE MILL CREEK ACQUISITION

The Mill Creek Acquisition is not open to the public at this time due to safety concerns with the road system and abandoned industrial buildings, a lack of facilities to accommodate visitors, and no available ranger or visitor services staff. The long-term goals for the property include obtaining funding to develop facilities, improving access, and providing staffing to allow public access. Visitation is allowed by guided tour, approved research, or resource management purposes.

2.8 CONSISTENCY WITH LOCAL PLANS AND POLICIES

The proposed Landscape Stabilization and Erosion Prevention Plan at the Mill Creek Acquisition is consistent with local plans and policies. The implementation of this plan is consistent with other projects conducted or planned by the County of Del Norte, Six Rivers National Forest, and Redwood National and State Parks. See Chapter 3, Section IX, Land Use and Planning, for a complete discussion of local plans and policies.

2.9 DISCRETIONARY APPROVALS

DPR has approval authority for the proposed Landscape Stabilization and Erosion Prevention Plan at the Mill Creek Acquisition. The plan will require discretionary approval from the California Department of Fish and Game (DFG) in the form of a Stream Alteration Agreement (SAA). The SAA will be applied for after the Notice of Determination (NOD) has been filed for this plan. An Army Corps of Engineers Section 404 Permit will be obtained by DFG for this plan, and NOAA Fisheries will be consulted as part of the Section 404 permitting process. The U.S. Fish and Wildlife Service (USFWS) will review the planned project sites with regard to the marbled murrelet and northern spotted owl. Prior to operations, a letter of Technical Assistance will be obtained from the USFWS, identifying any temporal or spatial operating restrictions to avoid impacting these species.

2.10 RELATED PROJECTS

This plan proposes work similar to the 4th Switchback Road Removal Project ongoing at the MCA and the Bummer Spurs Road Removal Project planned to begin during the 2005 construction season. Nearby, the Last Chance Road Removal project was conducted in Del Norte Coast Redwoods State Park in 1997. In addition, National Park staff of Redwood National and State Parks conducts an ongoing road removal program in Redwood Creek. North Coast Redwoods District is planning numerous similar road removal projects in other areas of the District.

Johnson (1995) has shown that the cumulative effect of treating numerous sites in a watershed reduces chronic high levels of sediment delivered to streams from failing roads and road related structures, and reduces peak flows in sensitive coastal streams. Treatment of proposed sites in the MCA should substantially aid watershed recovery and reduce cumulative negative effects induced by dense backcountry road networks that persist in NCRD disturbed parklands. In an analysis of similar projects in Redwood National and State Parks, Madej (2000) found that the short-term erosion and sedimentation that occurs at stream crossings throughout the project areas will deliver less total material than will be deposited over time, if the projects were not implemented.

Many of the crossings within the proposed plan area are large and steeply perched in the tributaries to Rock Creek and Mill Creek. In addition, failing crossings higher in the watersheds are contributing sediment to the streams and increasing the likelihood of plugged culverts at the lower crossings. This plan will address crossings throughout the watersheds in various stages of failure and prevent further degradation of stream conditions downstream.

A park-wide forest restoration program is underway within the Mill Creek Acquisition. The program proposes to thin 300 to 500 acres per year for five years beginning in 2005. Work proposed for this plan will be coordinated with forest restoration activities so that timing conflicts and potential cumulative effects can be minimized in common work areas.

**CHAPTER 3
ENVIRONMENTAL CHECKLIST**

PROJECT INFORMATION	
1. Project Title:	Landscape Stabilization and Erosion Prevention Plan
2. Lead Agency Name & Address:	California Department of Parks and Recreation 1416 Ninth Street P.O. Box 942896 Sacramento, CA 94296-0001
3. Contact Person & Phone Number:	John E. Harris (707) 445-6447 x-19 or (fax) 441-5737
4. Project Location:	MILL CREEK ACQUISITION
5. Project Sponsor Name & Address:	California Department of Parks & Recreation North Coast Redwoods District 3431 Fort Ave. Eureka, California 95503
6. General Plan Designation:	New Acquisition
7. Zoning:	Federal and State Land(Del Norte County – General Plan)
8. Description of Project:	<p>DPR proposes to make the improvements described herein to the Mill Creek Acquisition (MCA) watersheds. The following is a summary of the planned improvements:</p> <p>1. Full Road Recontouring Full or partial road recontouring of approximately 123 miles of abandoned, unstable inner-gorge, mid-slope and ridge top service and skid roads within the Mill Creek Watersheds. The work will include excavation of embankment fill from roads and stabilization of excavated materials on the cutbench to fully or partially recontour natural (pre-disturbance) topography.</p> <p>2. Stream Crossing Removal Removal of fill material from 376 stream crossings associated with the service and skid roads indicated above. The majority of the crossings will have no flow during the proposed construction season and are typically small fill crossings. Stream crossing removal will include removal of road and landing fill from stream channels and floodplains. Placing excavated material against nearby road cut slopes and recontouring to match the natural slopes will reduce road-crossing failures. Stream channel bed, banks, and adjacent slopes will be restored to their pre-crossing configuration. Longitudinal stream gradient will be reestablished through the crossing site.</p>
9. Surrounding Land Uses & Setting:	Refer to Chapter 3 of this document (Section IX, Land Use Planning)
10. Approval Required from Other Public Agencies:	California Department of Fish and Game.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

If implemented as written, this plan could result in a "Potentially Significant Impact" involving at least one area of the environmental factors checked below, as indicated in the Initial Study on the following pages.

- | | | |
|--|---|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agricultural Resources | <input type="checkbox"/> Air Quality |
| <input type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Geology/Soils |
| <input type="checkbox"/> Hazards & Hazardous Materials | <input type="checkbox"/> Hydrology/Water Quality | <input type="checkbox"/> Land Use/Planning |
| <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Noise | <input type="checkbox"/> Population/Housing |
| <input type="checkbox"/> Public Services | <input type="checkbox"/> Recreation | <input type="checkbox"/> Transportation/Traffic |
| <input type="checkbox"/> Utilities/Service Systems | <input type="checkbox"/> Mandatory Findings of Significance | <input checked="" type="checkbox"/> None |

DETERMINATION

On the basis of this initial evaluation:

I find that the proposed project **COULD NOT** have a significant effect on the environment and a **NEGATIVE DECLARATION** will be prepared. ☐

I find that, although the original scope of the proposed project **COULD** have had a significant effect on the environment, there **WILL NOT** be a significant effect because revisions/mitigations to the project have been made by or agreed to by the applicant. A **MITIGATED NEGATIVE DECLARATION** will be prepared. ☒

I find that the proposed project **MAY** have a significant effect on the environment and an **ENVIRONMENTAL IMPACT REPORT** or its functional equivalent will be prepared. ☐

I find that the proposed project **MAY** have a "potentially significant impact" or "potentially significant unless mitigated impact" on the environment. However, at least one impact has been adequately analyzed in an earlier document, pursuant to applicable legal standards, and has been addressed by mitigation measures based on the earlier analysis, as described in the report's attachments. An **ENVIRONMENTAL IMPACT REPORT** is required, but it must analyze only the impacts not sufficiently addressed in previous documents. ☐

I find that, although the proposed project could have had a significant effect on the environment, all potentially significant effects have been adequately analyzed in an earlier EIR or Negative Declaration, pursuant to applicable standards, and have been avoided or mitigated, pursuant to an earlier EIR, including revisions or mitigation measures that are imposed upon the proposed project. Therefore, all impacts have been avoided or mitigated to a less-than-significant level and no further action is required. ☐

Original Signature on File – North Coast Redwoods District Office

John E. Harris
Environmental Coordinator

Date:

EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers, except "No Impact", that are adequately supported by the information sources cited. A "No Impact" answer is adequately supported if the referenced information sources show that the impact does not apply to the project being evaluated (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on general or project-specific factors (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must consider the whole of the project-related effects, both direct and indirect, including off-site, cumulative, construction, and operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, the checklist answers must indicate whether that impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate when there is sufficient evidence that a substantial or potentially substantial adverse change may occur in any of the physical conditions within the area affected by the project that cannot be mitigated below a level of significance. If there are one or more "Potentially Significant Impact" entries, an Environmental Impact Report (EIR) is required.
4. A "Mitigated Negative Declaration" (Negative Declaration: Less Than Significant with Mitigation Incorporated) applies where the incorporation of mitigation measures, prior to declaration of project approval, has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact with Mitigation." The lead agency must describe the mitigation measures and briefly explain how they reduce the effect to a less than significant level.
5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR (including a General Plan) or Negative Declaration [CCR, Guidelines for the Implementation of CEQA, § 15063(c)(3)(D)]. References to an earlier analysis should:
 - a) Identify the earlier analysis and state where it is available for review.
 - b) Indicate which effects from the environmental checklist were adequately analyzed in the earlier document, pursuant to applicable legal standards, and whether these effects were adequately addressed by mitigation measures included in that analysis.
 - c) Describe the mitigation measures in this document that were incorporated or refined from the earlier document and indicate to what extent they address site-specific conditions for this project.
6. Lead agencies are encouraged to incorporate references to information sources for potential impacts into the checklist or appendix (e.g., general plans, zoning ordinances, biological assessments). Reference to a previously prepared or outside document should include an indication of the page or pages where the statement is substantiated.
7. A source list should be appended to this document. Sources used or individuals contacted should be listed in the source list and cited in the discussion.
8. Explanation(s) of each issue should identify:
 - a) the criteria or threshold, if any, used to evaluate the significance of the impact addressed by each question **and**
 - b) the mitigation measures, if any, prescribed to reduce the impact below the level of significance.

ENVIRONMENTAL ANALYSIS

The Environmental Analysis (Initial) Checklist was prepared to assess the proposed plan's impact on the environment. The environmental setting for each topic describes the conditions currently existing at the plan site. Potential environmental impacts, identified by checklist point, are addressed in the discussion section. For each impact identified as "less than significant with mitigation", mitigation measures have been specified to reduce the impact to a less than significant level.

ENVIRONMENTAL ISSUES

I. AESTHETICS.

ENVIRONMENTAL SETTING

The Mill Creek Acquisition, which has been included within Del Norte Coast Redwoods State Park lies within the coastal mountains of northwestern Del Norte County. The area has served as a commercial timber property for more than a century. The property is covered with even-aged conifer forest and has a dense network of timber hauling roads. Numerous recent clearcuts are still visible within and surrounding the plan area. Road scars are ubiquitous and dissect all the subwatersheds within the acquisition. Numerous road-related landslides are visible within the project area surrounding subwatersheds.

The treatment area of the proposed plan is throughout the MCA as defined by the park boundaries in 2002. The park property is approximately 5 miles southeast of Crescent City.

Past road removal projects in Del Norte Coast Redwoods State Park have greatly improved aesthetic values in the park. Removal of the old road scars added to the aesthetic values of the Last Chance Creek area and natural vegetation has already completely hidden the former road corridor and the rehabilitation work.

There is no visitor access to the MCA at this time.

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
WOULD THE PROJECT:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

DISCUSSION

- The project sites are not visible from any vista point or scenic highway. The sites are located in remote backcountry portions of the acquisition, which is not open to the public. The road removal sites will not be visible from any public use areas. No impact.
- None of the proposed plan sites are within a state scenic highway easement or viewshed. The construction sites are confined to areas previously disturbed by clear-cut logging practices. The work will help improve the scenic resource of second growth forest. The work will improve the backcountry characteristics by removing road scars and related features, thereby improving the park experience if public access is developed in the

future. Old-growth trees will be protected from damage by equipment. No rock outcrops will be damaged by excavation. No impact.

- c. The MCA is not open to the public at this time due to problems with the road system and because park staffing capability is insufficient in the area to provide for visitor safety. Therefore, the general public will not view temporary visual effects as the work is progressing. As park facilities are added and the MCA is opened to the public, visitors will be able to view the work locations, however, the final site conditions will closely match the previous undisturbed landform and will be much less obtrusive than the project during construction. No impact.
- d. The plan will not create glare because all larger trees, which moderate light intensities and provide shade to the site will be preserved along the road removal locations. Lighting is not an element of this plan and no new light sources will be introduced into the landscape. All construction work will be limited to daylight hours, eliminating the need for work lights. This plan will create no new source of light or glare and, therefore, will have no impact in this area.

II. AGRICULTURAL RESOURCES

ENVIRONMENTAL SETTING

The MCA is now part of the California State Park System. Commercial timber operations have stopped as part of the transition of the property from private timber holdings to public parkland. The adjoining land to the east and south of the park is commercial timberland and National Forest. Land to the north and west of the MCA is zoned for recreation.

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
WOULD THE PROJECT:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

* In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997), prepared by the California Department of Conservation as an optional model for use in assessing impacts on agricultural and farmland.

DISCUSSION

- a) No land adjoining the plan site in any direction is zoned as agricultural land or used for agricultural purposes, as defined by the United States Department of Agriculture land inventory and monitoring criteria, as modified for California. Therefore, this plan will have no effect on any category of California Farmland, conflict with any existing zoning for agricultural use or Williamson Act contract, or result in the conversion of Farmland to non-agricultural use. No impact.
- b) As noted in the Environmental Setting above, the MCA is part of the California State Park System and does not support any agricultural operations or farmland. No impact.
- c) Departmental policies and practices, deed restrictions, and other constraints related to acquisition of designated agricultural lands and the impacts of continued agricultural use on the park's operational and resource management needs, do not allow for agricultural uses in the MCA. No impact to agricultural resources.

III. AIR QUALITY

ENVIRONMENTAL SETTING

The project site is in Del Norte County, which is part of the North Coast Air Basin (Basin), under the jurisdiction of the North Coast Unified Air Quality Management District (NCUAQMD or District) and the United States Environmental Protection Agency (USEPA) Region IX. NCUAQMD is the regional agency that regulates sources of air pollution within Del Norte County. The District's boundaries include Humboldt, Trinity, and Del Norte Counties. The NCUAQMD's main purpose is to enforce local, state, and federal air quality laws and regulations. The following determinations were based on current significance criteria established by the NCUAQMD and the USEPA.

Del Norte County has relatively clean air due to frequent rains, ocean winds, low levels of commuter traffic, and a small industrial base. Because of these conditions, Del Norte County is currently in attainment with all California standards including: carbon monoxide, hydrogen sulfide, lead, ozone, nitrogen dioxide, sulfur dioxide, and sulfides. An area is designated in attainment if the state standard for the specified pollutant was not violated at any site during a three-year period.

The district is in non-attainment with California standards for particulate matter (PM 10, or particles with an aerodynamic diameter of 10 microns or less). The major sources of PM 10 are combustion (e.g., wood smoke; emissions from industry, automobiles, and diesel engines); and dust (e.g., airborne soil, road dust caused by vehicle travel). An area is designated in non-attainment if there was at least one violation of a state standard for the specified pollutant within the area boundaries. With respect to Federal standards, the North Coast Air Basin is in attainment of all Federal standards and is undetermined for PM 2.5 pollutants.

Some of the roads within the Plan area may contain serpentine soils. Serpentine soils can contain naturally occurring asbestos minerals, some of which pose a hazard to human health. All of the roads within the plan area are greater than one mile from a sensitive receptor, however workers may be exposed to asbestos dust minerals.

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
WOULD THE PROJECT:				
a) Conflict with or obstruct implementation of the applicable air quality plan or regulation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations (e.g., children, the elderly, individuals with compromised respiratory or immune systems)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

DISCUSSION

- a) Work proposed in this plan is not in conflict with or will not obstruct implementation of any applicable air quality plan for Del Norte County, the North Coast Air Basin, MCAQMD, or USEPA Region IX. The organic material generated during implementation of this plan will not be burned. No diesel portable equipment will be used during the project. No impact.
- b,c) The proposed plan will not emit air contaminants at a level that, by themselves, will violate any air quality standard, or contribute to a permanent or long-term increase in any air contaminant. However, plan construction will generate short-term emissions of fugitive dust (PM10) and involve the use of equipment and materials that may emit ozone precursors (i.e., reactive organic gases [ROG] and nitrogen oxides, or NOx). Increased emissions of PM10, ROG, and NOx could contribute to existing non-attainment of PM10 conditions and interfere with achieving the projected attainment standards. Consequently, construction emissions will be considered a potentially significant short-term adverse impact. Implementation of Mitigation Measure Air-1 below will reduce this to a less than significant level.

A geologist will survey for the presence of serpentine rock along roads that fall within the mapped serpentine soil areas. If serpentine is present, soil samples will be taken and analyzed at a local materials lab for the presence of asbestos. If asbestos is present in concentrations of 1% or greater, dust prevention using soil wetting will be used to eliminate any visible dust within the work area. Soil wetting shall be conducted so as not to generate any surface runoff into watercourses. Water drafting will be conducted in accordance with the California Department of Fish and Game's Water Drafting Guidelines. Access roads to the work site will be posted to alert drivers to the potential exposure to asbestos. Implementation of the following mitigation measures will reduce potential impacts to a less than significant level.

MITIGATION MEASURES AIR-1
<ul style="list-style-type: none">• All equipment engines will be maintained in good condition, in proper tune (according to manufacturer's specifications), and in compliance with all State and federal requirements.• Traffic speed on unpaved roads will be limited to 15 miles per hour (mph).• Excavation and grading activities will be suspended when sustained winds exceed 25 mph, instantaneous gusts exceed 35 mph, or when dust from construction might obscure driver visibility on public roads.• No more than ten pieces of heavy equipment will operate at the sites at the same time. No more than ten service vehicles will enter the project site at one time.• In areas where asbestos has been detected in concentrations greater than 1%, soil wetting will be used to suppress all visible dust. Soils will be maintained at a moisture level that will not generate dust. Soil wetting shall be conducted so as not to generate any surface runoff into watercourses. Water drafting will be conducted in accordance with the National Marine Fisheries Service, 2001 Water Drafting Guidelines. Access roads to the work site will be posted to alert drivers to the potential exposure to asbestos. All equipment will be rinsed of soil prior to leaving the asbestos containing work area to prevent track-out.

- d) The plan will not expose sensitive receptors to substantial pollutant concentrations. The MCA is not open to the public. There are no developments or public use facilities within one mile of the project area. No impact.
- e) The proposed work will not result in the generation of objectionable odors that will affect a substantial number of people. The MCA is not open to the public. There are no developments or public use facilities within one mile of the plan area. No impact.

IV. BIOLOGICAL RESOURCES

ENVIRONMENTAL SETTING

PLANTS

At least 15 vegetation series (Sawyer and Keeler-Wolf, 1995) are present on the Mill Creek property according to the Mill Creek Property Interim Management Recommendations prepared by Stillwater Associates (2002), which is the source of information for this section. Vascular plant species diversity is high with possibly over 300 species present. The following tree-dominated vegetation series are found on the property (listed in the order of their abundance): Redwood, Red Alder, Western White Pine, Knobcone Pine, Sitka Spruce, and Jeffrey Pine. Herbaceous-plant dominated series on the property include Bulrush, Bulrush-Cattail, California Annual Grassland, Introduced Perennial Grass, and Pampas grass. Shrub-dominated series include the Blue Blossom and Huckleberry Oak series. Other series present include the Darlingtonia and Fen series.

The coastal fog belt provides good growing conditions for fast-growing conifers such as the coast redwood (*Sequoia sempervirens*). Douglas-fir (*Pseudotsuga menziesii*) is found in association with redwoods, particularly in the eastern portion of the property, where coastal influence is diminished. Sitka spruce (*Picea sitchensis*), grand fir (*Abies grandis*), western hemlock (*Tsuga heterophylla*), western red cedar (*Thuja plicata*), Port Orford cedar (*Chamaecyparis lawsoniana*), red alder (*Alnus rubra*), and tan oak (*Lithocarpus densiflorus*) are found as minor components of the coastal forest on the property. Past management of the property has resulted in primarily even-aged, monospecific forest stands of various ages.

The composition of riparian stands along fish-bearing streams on the property differs depending on whether the stands border high-gradient, confined channels or lower-gradient, less-confined channels. Riparian communities along high-gradient, confined channels are currently dominated by sapling or multi-layered stands <50 years old. Most stands along these channels consist of pole-size, second-growth trees, with trees >61 cm (24 in) dbh accounting for less than 25% of the canopy cover.

Hardwoods, particularly red alder and maple, are an important component of riparian stands along the lower-gradient, less-confined channels found on the property. Forty-nine percent of the riparian area along low gradient channels consists of hardwoods, with most of these stands being pole-size trees >50 years of age with a few scattered large-diameter old-growth redwoods in the overstory. Hardwoods generally dominate riparian areas along large, unconfined channels because these trees quickly colonize gravel bars that become stable following large floods or channel avulsions. Redwood and Douglas fir trees <28 cm (11 in) dbh and <30 years of age dominate the riparian stands along the remaining streams.

Several rare and/or endangered plant species are present or can be potentially found on the Mill Creek property. Two special plant species that have the potential to occur are McDonald's rock cress (*Arabis macdonaldiana*) and Western lily (*Lilium occidentale*). McDonald's rock cress is listed as rare in California and federally endangered, and Western lily is listed as endangered in California and federally endangered. Previous surveys have found four rare species on the property: heart-leaved tway blade (*Listera cordata*), Del Norte County iris (*Iris innominata*), Suksdorf's wood sorrel (*Oxalis suksdorfii*) and California pitcherplant (*Darlingtonia californica*). All are CNPS List 4 species (plants of limited distribution; a watch list). Species potentially present in the project area include 16 CNPS List 1B species (plants that are rare, threatened, or endangered in California and elsewhere), 17 CNPS List 2 species (plants that are rare, threatened, or endangered in California, but more common elsewhere), and 37 CNPS List 4 species.

Tree species of particular interest found within the Mill Creek property include knobcone pine (*Pinus attenuata*), Port Orford cedar (*Chamaecyparis lawsoniana*), western white pine (*Pinus monticola*), and Jeffrey pine (*Pinus jeffreyi*). Knobcone pine is a serotinous (fire-adapted) species that can be a climax species on poor soils or an early successional species in redwood and Douglas-fir. Knobcone pine is abundant in old harvest areas of various ages, due to the extensive timber management and broadcast burning. Recently harvested and burned plantations on the property are characterized by an abundance of regenerating knobcone pines. Such reproduction is unusual within the species' range due to past fire suppression and absence of timber management in knobcone pine stands in general.

The second tree species of special interest is the Port Orford cedar (POC), which occurs throughout the property. POC generally occupies coastal ranges in a 40-km (25-mi) wide zone extending from Reedsport, Oregon south to

central Humboldt County. POC is generally uncommon across its range, although it is locally abundant in some areas of the property. This species is suffering substantial mortality due to an exotic, fatal root disease called Port Orford Cedar root disease (*Phytophthora lateralis*) that is spreading readily throughout its range. Although the disease is common in the nearby South Fork of the Smith River drainage and the Smith River National Recreation Area, until recently there had been no indication that the disease was present within the Mill Creek property. In fact, the Mill Creek watershed had been reported to be one of the few unaffected watersheds in Del Norte County. Lack of the disease was probably due to the absence of through traffic and the relatively isolated watersheds. In addition, Stimson did not use heavy equipment brought from off-site, which decreased the potential for the disease to be introduced from other areas. In 2002, the root disease was confirmed by U.S. Forest Service plant pathologists at two locations in upper Bummer Lake Creek and one on Rock Creek on the property. No operations are planned in known infestation areas.

A third tree of interest is the Jeffrey pine, which occurs on serpentine and periodite soils and under environmentally harsh conditions. This pine has a deep root system and is found at elevations between 1,000 and 3,100 m (3,281 and 10,171 ft). The rare Koehler's stipitate rock cress (*Arabis koehleri* var. *stipitata*) and the federally endangered McDonald's rock cress (*Arabis macdonaldiana*) may occur in association with this species. Within the Mill Creek property, the Jeffrey pine series is only found in a small area in the northeast corner of the property. It is unlikely that these species will be found at most planned project sites.

At least two *Darlingtonia* fens occur east of Childs Hill on ultramafic soils. One fen is approximately 12 by 24 m (40 ft by 80 ft) and dominated by California pitcherplant (*Darlingtonia californica*), Labrador-tea (*Ledum glandulosum*), Sitka alder (*Alnus viridis* var. *sinuata*), salal (*Gaultheria shallon*), slough sedge (*Carex obnupta*), and western azalea (*Rhododendron occidentale*). In addition, a small population of the relatively rare Vollmer's lily (*Lilium pardalinum* spp. *vollmeri*) is located on the site. *Darlingtonia* fens are often associated with other sensitive plant species. A second fen was documented by Stimson personnel on the lower slope of Rattlesnake Mountain. More fens may be present on the east slope of Childs Hill, in the northeast portion of the property and on the west slope of Rattlesnake Mountain. No known *Darlingtonia* fens occur in the plan areas.

The Fen series is similar to the *Darlingtonia* Fen series, except that *Darlingtonia californica* and a few other species are absent. Fen series occur in a few areas on the property. One site is approximately 12 m by 70 m (40 ft by 70 ft) and dominated by Nootka reedgrass (*Calamagrostis nutkaensis*), Sitka alder, deer fern (*Blechnum spicant*), Labrador tea, salal, bog St. John's wort (*Hypericum anagalloides*), and peat moss (*Sphagnum* spp.). Similar fens are exceedingly rare in northern California, making this fen significant. It is similar to a fen located in the Crescent City Marsh Wildlife Area, approximately 1.5 miles to the north, which supports the largest known population of the federally endangered western lily (*Lilium occidentale*). Thus, the fen series on the Mill Creek property provides a transitional stage between the coastal habitat of the western lily, and the more inland *Darlingtonia* fens. Additional representatives or species at the southern limits to their distributions such as sweet grass (*Hierochloa odorata*) and great burnet (*Sanguisorba officinalis*) could be present in the east half of the Mill Creek property. Although it is unlikely that plant species of the Fen series will be found at the planned project sites the botanical surveys should detect their presence and appropriate mitigation measures will be applied.

ANIMALS

Based on the number of plant communities and variety of habitat types found on the property, it is likely that wildlife diversity is relatively high. Although reptile diversity is low, shaded seeps and streams and old-growth forest habitats on the property provide habitat for a variety of amphibians, including five species listed by the California Department of Fish and Game (DFG) as Species of Special Concern (SCS): southern torrent salamanders (*Rhyacotriton variegatus*); tailed frogs (*Ascaphus truei*); northern red-legged frogs (*Rana aurora aurora*) and foothill yellow-legged frogs (*Rana boylei*). The southern torrent salamander, which occurs in perennial and ephemeral seeps, springs, and lower order streams that contain clean gravels with interstitial spaces, is common on the property. This species and the larval form of the tailed frog are both susceptible to increased sediment loads. Another SCS amphibian species, the Del Norte salamanders (*Plethodon elongatus*) is known to occur in many of the talus slopes located throughout the property. Small mammals adapted to forest habitats in this area include deer mice (*Peromyscus maniculatus*), dusky-footed woodrats (*Neotoma fuscipes*), northern flying squirrels (*Glaucomys sabrinus*), California red tree voles (*Arborimus longicaudus*) (SCS), and red-backed voles (*Clethrionomys californicus*). Several bat species may also occur on the property. Larger mammals known to occur in Del Norte County include gray fox (*Urocyon cinereoargenteus*), coyote (*Canis latrans*), black bear (*Ursus americanus*), river otter (*Lutra canadensis*), bobcat (*Felis rufus*), mountain lion (*Felis concolor*), black-tailed deer (*Odocoileus hemionus*), and Roosevelt elk (*Cervus elaphus rooseveltis*). Humboldt marten (*Martes*

Americana humboldtensis) which were believed to be extinct have been documented east of the property on the Six Rivers National Forest. The five amphibian species of special concern may be present in the planned project sites.

Bird species on the property include neotropical migrants, such as purple martin (*Progne subis*), yellow warbler (*Dendroica petechia*), and Vaux's swift (*Chaetura vauxi*), northern spotted owls (*Strix occidentalis caurina*) and old-growth-associated species such as the marbled murrelet (*Brachyramphus marmoratus*). The northern spotted owl is federally threatened, whereas the marbled murrelet is federally threatened and state endangered. An additional listed species that is known to occur on the property is the bald eagles (*Haliaeetus leucocephalus*) which is currently federally proposed for de-listing but is still state endangered. No known bald eagle nests occur on the property. The closest known nest is well to the south of the acquisition near the Freshwater Lagoon area. Bald eagle use on the property is primarily restricted to winter foraging along the fish bearing streams during the salmonid runs. The proposed action should not affect this species. The proposed action will not occur within ¼ mile of marbled murrelet habitat and therefore should not affect this species. Northern spotted owls are known to nest on the Mill Creek Acquisition.

Streams within the Mill Creek property support both anadromous and resident fish populations. The Southern Oregon/Northern California Coast (SONCC) ESU coho salmon (*Oncorhynchus kisutch*) are federally listed as threatened and are currently the only listed fish species found in the Mill Creek watershed. The coho is also listed as state threatened from Punta Gorda to the Oregon border. Other anadromous salmonids known to occur in Mill Creek include fall chinook salmon (*Oncorhynchus tshawytscha*), chum salmon (*Oncorhynchus keta*), steelhead (*Oncorhynchus mykiss*), and coastal cutthroat trout (*Oncorhynchus clarkii*). Other fish species that have been reported from streams on the Mill Creek property include western brook lamprey (*Lampetra richardsoni*), river lamprey (*Lampetra ayresi*), Pacific lamprey (*Lampetra tridentate*), prickly sculpin (*Cottus asper*), riffle sculpin (*Cottus gulosus*), threespine stickleback (*Gasterosteus aculeatus*), Klamath smallscale sucker (*Catostomus rimiculus*), and American shad (*Alosa sapidissima*). Introduced fish species may be present such as black bass (*Micropterus spp.*), sunfish (*Lepomis spp.*), and catfish (*Ictaluridae*) that were previously introduced into the 4.6-acre-foot reservoir located to the northwest of the Forestry Center.

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
WOULD THE PROJECT:				
a) Have a substantial adverse effect, either directly or through habitat modification, on any species identified as a sensitive, candidate, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game, the U.S. Fish and Wildlife Service, or NOAA Fisheries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands, as defined by §404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

wildlife nursery sites?

- e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? ☐ ☐ ☐ ☒
- f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? ☐ ☐ ☐ ☒

DISCUSSION

- a) A primary goal of road rehabilitation is the improvement of habitat for, and protection of, rare, threatened, and endangered species. The plan will be conducted in compliance with all applicable State and federal threatened and endangered species protection laws and regulations. Work under this plan incorporates all relevant recommendations DFG has made to avoid and/or minimize impacts to rare, threatened or endangered species in consultations on past projects. In addition, DPR will obtain a Streambed Alteration Agreement (SAA) from DFG for each phase of implementation, a process that includes consultation between DFG and several federal regulatory agencies. Recommendations from NOAA Fisheries, which enumerate protection measures for coho salmon and their habitat, will be conditions of the SAA. In addition, this project will use the methodology outlined in Chapter X of DFG's Stream Restoration Manual, for which NOAA Fisheries was consulted, and into which their recommendations were incorporated. The USFWS and DFG are providing technical assistance for the planning and implementation phases of the watershed restoration work at the MCA, and will conduct a field review of each year's work prior to implementation. A letter of Technical Assistance from the Arcata office of the US Fish and Wildlife Service will be attained and appended to the MND.

Plants

As indicated in the Environmental Setting above, several sensitive plant species exist in the park. Activities conducted as part of this plan such as brush clearing and excavation of the road prism have the potential to cause a significant impact to one or more of these sensitive species. Implementation of the mitigation measures listed below will reduce any potential impact to a less than significant level.

MITIGATION MEASURES BIO-1 (PLANTS)		
<p>1. Prior to operations surveys shall be conducted by a qualified botanist within the project boundaries (all areas of proposed operations and adjacent areas that could be impacted where sensitive plant habitat is present). Surveys shall be conducted in conformance with the DFG "Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities" (www.dfg.ca.gov/whdab/pdfs/guideplnt.pdf and Appendix D). Results of the survey effort shall be submitted to the Senior Resource Ecologist and the DFG at least 10 business days prior to commencing operations to allow sufficient time for review of the survey effort.</p> <p>2. DPR's primary means of mitigation for plants listed as Rare, Threatened, and Endangered, or which occur on the CNPS Lists 1A, 1B or 2 shall be avoidance (see below). These measures are dependent on the species natural history and the potential for adverse affects or the potential for take. CNPS List 3 and 4 plants will be avoided when feasible; however, will not be required. DPR reserves the right to develop site specific measures in consultation with the DFG. Such measures will be amended into the MND.</p>		
Species Name	Common Name	Mitigation
		Wetland Shade Associated Species
<i>Lilium occidentale</i>	western lilly	A 75 foot equipment exclusion

<i>Smilax jamesii</i>	English Peak greenbriar	not be altered or removed nor shall the hydrology associated with the habitat be altered.
<i>Viola primulifolia</i> spp. <i>occidentalis</i>	western bog violet	
		Wetland Associated Species
<i>Carex leptalea</i>	flaccid sedge	A 25 foot equipment exclusion zone shall be established around plants or populations. The hydrology associated with this habitat shall not be altered.
<i>Carex praticola</i>	meadow sedge	
<i>Carex viridula</i> var. <i>viridula</i>	green sedge	
<i>Castilleja miniata</i> spp. <i>oregano</i>	Siskiyou indian paintbrush	
<i>Epilobium oreganum</i>	Oregon fireweed	
<i>Gentiana setigera</i>	Mendocino gentian	
<i>Lathyrus palustris</i>	marsh pea	
<i>Lewisia oppositifolia</i>	opposite-leaved lewisia	
<i>Montia howellii</i>	Howell's montia	
<i>Sagittaria sanfordii</i>	Sanford's arrowhead	
<i>Sanguisorba officinalis</i>	great burnet	
		Forest Shade Associated Species
<i>Asarum marmoratum</i>	marbled wild ginger	A 75 foot equipment exclusion zone shall be established around plants or populations. Within this buffer the overstory canopy shall not be altered or removed.
<i>Erythronium hendersonii</i>	Henderson's fawn lilly	
<i>Erythronium howellii</i>	Howell's fawn lilly	
<i>Monotropa uniflora</i>	indian-pipe	
<i>Saxifrage nuttallii</i>	Nuttall's saxifrage	
		Forest and Scrub Associated Species
<i>Arabis koehleri</i> var. <i>stipitata</i>	Koehler's stipitate rock cress	A 25 foot equipment exclusion zone shall be established around plants or populations.
<i>Arabis macdonaldiana</i>	McDonald's rock cress	
<i>Arienium trichomanes</i> ssp. <i>trichomanes</i>	maidenhair spleenwort	
<i>Arctostaphylos hispidula</i>	Howell's manzanita	
<i>Boschniakia hookeri</i>	small groundcone	
<i>Cardamine nuttallii</i> var. <i>gemmata</i>	yellow-tubered toothwort	
<i>Minuartia howellii</i>	Howell's sandwort	
<i>Pyrrocoma racemosa</i> var. <i>congesta</i>	Del Norte pyrrocoma	
<i>Senecio bolanderi</i> var. <i>bolanderi</i>	Seacoast ragwort	
<i>Sidalcea malachroides</i>	Maple-leaved checkerbloom	
<i>Sidalcea malviflora</i> spp. <i>patula</i>	Siskiyou checkerbloom	
<i>Sidalcea oregana</i> spp. <i>eximia</i>	Coast checkerbloom	
<i>Streptanthus howellii</i>	Howell's jewelflower	
<i>Thermopsis robusta</i>	Robust false lupine	

3. Fens shall be provided with a minimum 25-foot equipment exclusion zone and the hydrology supporting the fens shall not be altered.

Fish

The majority of the stream crossings are located on ephemeral (class 3) or seasonal (class 2) watercourses that do not offer fish habitat and will be dry during excavation. However, there is the potential for a significant impact to downstream fish populations or their habitat due to siltation and/or turbidity in areas with running water during construction, specifically where known or potential fish habitat will be downstream from crossing removal sites. Implementation of the following mitigation measures will reduce any potential impact to a less than significant level.

MITIGATION MEASURES BIO-2 (FISH)

- Stream crossing excavations will take place in dry channels or in channels where stream flow is diverted around the excavation sites. Excavations have been designed to limit negative effects on water quality to the maximum extent practicable.
- In some crossings, where the stream is flowing at a slow rate and cannot be captured and diverted, filter structures will be installed downstream to filter turbid discharge from the worksite. In other crossings, where flow is sufficient to be intercepted, a small diversion dam will be built upstream and stream flow piped around the worksite and discharged into the stream below the worksite.
- It is anticipated that most of the work will occur outside of the rainy season (June 1st to October 15th). On roads where potential sediment delivery to streams exists, construction activities after October 15th will proceed using conditions established by NOAA Fisheries during consultation for the Army Corps of Engineers permit obtained by DFG for this plan. This work will also be conducted in a manner consistent with conditions applied by NOAA Fisheries to similar projects located on nearby federal lands.
- If periods of dry weather are predicted after October 15th, small additional work items may be done with DFG approval, if they can be completed within the window of dry weather. DPR will have materials to sufficiently mulch bare work areas on-site at all times. Work will be conducted with weekly consultation with DFG regarding weather forecasts and streamflow conditions. Work will be conducted so that no more than one-half day will be required to finish all earth moving and mulching work. All access roads will be winterized prior to any additional earth moving tasks.
- Streams and riparian zones will not be used as equipment staging or refueling areas. Equipment will be stored, serviced and fueled away from riparian areas. Heavy equipment will be cleaned (e.g., power washed, steam) prior to use below the ordinary high water mark.
- Any disturbed soil adjacent to stream channels will receive evenly distributed mulch coverage with masticated brush and trees to reduce sheet erosion. Coverage will be 80% adjacent to the stream or where no native mulch buffer exists between disturbed soil and a stream channel. Mulch will consist exclusively of native slash generated during the clearing phase of the rehabilitation work.
- DPR will ensure that contract(s) associated with the project contain all of the relevant BMPs, and other descriptions of sideboards and measures identified in this MND and in other documents associated with consultations for this project as necessary to avoid or minimize incidental take of SONCC coho salmon. If DPR determines that the contractor is not in compliance with the project contract, and non-compliance could result in greater effects than previously anticipated to SONCC coho salmon, DPR will cease and desist all operations and evaluate the contractor's performance. If the Contractor's performance cannot be corrected the contract will be terminated.

Birds

Field visits to date with USFWS to portions of the area of potential effect (APE) of the project show no nesting habitat for the northern spotted owl (NSO) or the marbled murrelet (MAMU); however, a very minor amount of potentially suitable NSO foraging habitat will be removed from some of the fill slopes and crossings in the APE. The USFWS does not consider this removal to result in a significant loss of habitat. USFWS recommends monitoring the remaining historic activity centers in the MCA, and may recommend surveying whenever roads to be removed are within ¼ mile of suitable habitat. No operations associated with this project will occur until a valid letter of Technical Assistance reflecting the current survey data has been obtained.

There is potential habitat for a variety of raptors within the area of the plan, however the potential for occupancy is relatively low. The following mitigation measures will be implemented to reduce any potential impacts to a less than significant level.

MITIGATION MEASURES BIO-3 (BIRDS)

- Northern Spotted Owl
 1. Absence of Northern Spotted Surveys (NSO) – If northern spotted owl surveys are not conducted then the following conditions shall apply.
 - a. No trees 12" dbh or greater shall be removed.
 - b. No operations shall occur from February 1 through August 31 (depending on the proposed action the August 31 date may be modified to July 10 through a request for Technical Assistance from the U.S. Fish & Wildlife Service).
 2. If trees 12" dbh or greater are to be removed then the following shall apply.
 - a. No operations shall occur unless a valid NSO technical assistance has been obtained from the U.S. Fish & Wildlife Service (Service). The results of the technical assistance may result in modification of the standard protection measures stipulated under Item c below.
 - b. Surveys for the NSO shall be conducted in conformance with accepted Service approved NSO survey protocols. A map showing the location(s) (if any) of known NSO activity centers during the past 3 years shall be provided. An activity center is defined as a site(s) identified through surveys conducted to protocol resulting in either the presence of nesting, pair status, or resident single status as defined in the northern spotted owl protocol (USFWS 1992). The final determination of an activity center is at the discretion of the USFWS.
 - c. If any known activity centers occur within 1,000 feet of the proposed action then the following standard protection measures shall apply (these measures may be subsequently changed through technical assistance with the Service).
 - i. A buffer zone for NSO's shall be established within a 1,000 foot radius of a tree or trees containing a nest or supporting an activity center during the NSO's critical nesting period which occurs from February 1 through August 31.
 - ii. No operations shall occur within a 500 foot radius of an activity center. Within the 500 foot to 1,000 foot spatial buffer the minimum habitat requirements of functional roosting habitat (minimum 60% canopy, avg. stand trees >11" dbh) shall be maintained.
 - iii. A temporal buffer out to 0.25 mile shall be established around any active activity center during the NSO's critical period which occurs from February 1, through August 31. During the critical period no operations shall occur within the temporal buffer.

MITIGATION MEASURES BIO-3 (BIRDS CONT.)

- Generic Falconiformes and Strigiformes Mitigation Measures

1. Pursuant to Fish & Game Code 3503.5 it is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto. Therefore prior to operations the DPR inspector shall be instructed in the identification of raptor nests (both occupied and unoccupied) and raptor breeding behavior by the District's Senior Resource Ecologist or his designee. During operations the inspector shall be responsible for assuring that no raptor nests are impacted by the proposed treatments by implementing the following measures:
 - a. If an unoccupied raptor nest is detected (during the generic critical period of January 15 through August 31, the nest tree and surrounding screen trees shall not be disturbed and the location shall immediately be reported to the Senior Resource Ecologist.
 - b. If an unoccupied raptor nest is detected outside of the generic critical period then operations shall cease in the vicinity of the nest and its location shall be reported immediately to the Senior Resource Ecologist. The Senior Resource Ecologist or his designee will then attempt to determine the species of raptor which constructed or used the nest and then the measures stated below under Item c will be applied (based on species).
 - c. If an occupied raptor nest is detected in the project area, then the DPR inspector will cease operations within ¼ mile of the raptor nest (unless it is known to be a peregrine falcon eerie then a 1 mile buffer shall be applied) and immediately notify the Senior Resource Ecologist. The Senior Resource Ecologist or his designee will then determine the species of raptor and then the following measures which were developed in concert with DFG (Scott Osborn, DFG pers comm. 04/13/05) will be applied (based on species).

Species ¹	Critical Nesting Period	Temporal (Disturbance) Buffer	Spatial (Habitat) Buffer
Accipitridae			
Northern Goshawk	March 1 – August 31	400 m (0.25 mile)	50m (165 ft.)
Cooper's Hawk	March 1 – August 31	400 m (0.25 mile)	30 m (100 ft.)
Sharp-shinned Hawk	March 1 – August 31	400 m (0.25 mile)	30 m (100 ft.)
Osprey	February 15 – August 31	400 m (0.25 mile)	30 m (100 ft.)
Redtail Hawk		400 m (0.25 mile)	15 m (50 ft.)
Red-shoulder Hawk	February 1 – August 31	400 m (0.25 mile)	15 m (50 ft.)
Falconidae			
Peregrine Falcon	January 15 – August 31	1.6 km (1 mile)	150 m (500 ft.)
Strigiformes			
Great Horned Owls	February 1 – August 31	400 m (0.25 mile)	30 m (100 ft.)
Cavity Nesting Owls	February 1 – August 31	400 m (0.25 mile)	30 m (100 ft.)

¹ Mitigation measures for the northern spotted owl are covered above. Other species of raptors such as the golden eagle, northern harrier, bald eagle, or long-eared owl is not expected to occur within the project area due to lack of habitat and are therefore not addressed.

2. DPR reserves the right to consult with the DFG on site-specific and species-specific mitigation measures. Any such changes will be amended into the MND if necessary.

Amphibians

Park staff conducting the watershed inventory mapped potential amphibian habitat within the project area, which includes springs, seeps, and watercourses. Park staff has been trained in species identification and to identify potential habitat. During construction, disturbed areas will be monitored for the presence of terrestrial salamanders and any that are found will be relocated into adjacent undisturbed areas. At stream crossings where stream diversion is necessary, dewatered areas will be visually inspected for presence of amphibians, and any present will be captured and released upstream. Although compacted road fill generally does not provide suitable habitat for amphibians, some loss may occur at stream crossing removal sites if they are

within the road prism subsurface, but not sufficiently deep in the crossings to avoid being excavated. Once road and crossing fill is removed and sediment loads are reduced, habitat quantity and quality in both the crossing vicinity and overall watershed will be greatly increased (Ashton, 2002).

The removal of crossings can result in both direct and indirect impacts to stream dwelling amphibians. The significance of these impacts depends on numerous factors including the species present and the extent of habitat disturbed (both instream and riparian). The removal of crossings can result in the loss of the substrate (gravels) and or large woody debris (LWD), both important habitat components for most stream dwelling amphibians and the temporary dewatering of habitat. It also results in an increase of suspended sediment which can impact feeding (both the ability to detect prey and prey species abundance), respiration, or result in the filling of the interstitial spaces between the gravels. This increase in suspended sediment is primarily believed to be a short lived impact in that it normally only occurs during the first winter as the channel stabilizes. However, the increases in sedimentation and loss of habitat can be exacerbated when multiple crossings are treated on the same watercourse. It is therefore important to evaluate the number of crossings proposed for removal on a given watercourse as well as the linear length of channel that will be treated. Impacts to stream dwelling amphibians can also occur due to the removal of streamside vegetation which can result in increased water temperatures and reduce LWD recruitment.

To address these concerns measures have been implemented into the project design that will assure or reduce the potential of dewatering (Bio-1), reduce suspended sediment (Bio-2), reduce impacts to streamside vegetation and expedite the reestablishment of trees in areas of channel disturbance (Bio-6), and repopulate the channel with LWD (Bio-4).

Road removal projects also have the ability to adversely affect terrestrial amphibians as well. Of primary concern for this project will be impacts to the Del Norte salamander. The Del Norte salamander inhabits closed canopy multistory mixed coniferous-hardwood forests which provide cool microclimates with moss and fern ground cover, a deep litter layer, and rocky substrates dominated by cobble (Welsh and Lind 1995). This species is generally considered to be an old-growth or late seral associate; however it has been documented in younger forests or in rocky embankments along open roadcuts within the marine-influenced coastal belt (Diller and Wallace 1994). As this species can be very susceptible to actions that disrupt the microclimate or physically remove or disrupt their environment measures are warranted (Bio-4).

MITIGATION MEASURES BIO-4 (AMPHIBIANS)
<ul style="list-style-type: none">• Large woody debris shall be incorporated back into restored water course channels by spanning across the channel a minimum of 1 tree ($\geq 12"$ dbh) per every 100 feet of restored channel. Each piece of wood shall be notched to a depth of at least 50% of the stem diameter to facilitate delivery to the channel. Preference will be given to the larger diameter stems. If sufficient material is available a stocking rate of 1 piece every 30-40 feet is preferred.• Areas that provide potential habitat for the Del Norte salamander shall be identified and mapped prior to operations. Spatial buffers which retain the microhabitat of the sites shall be established around areas identified as potential habitat for the Del Norte salamander. The minimum buffer for these sites shall be 50 feet; however, site specific measures can be developed through consultation with the District's Senior Resource Ecologist provided that the measures are then amended into the MND.

Trees

Some of the trees growing in road crossing or adjacent road embankment fill, regardless of diameter breast height (DBH), will be removed as part of the road rehabilitation process. Trees greater than 24 inches DBH, buried by fill that predates crossing or road construction, will be retained to the maximum extent possible. The lower limbs of these trees may be removed if required for access. Small trees that are buried in fill that predates road construction will be left whenever practical. Tree roots will be avoided, as the excavations will not be deeper than the original ground surface. Some adventitious roots that have grown into embankment fill may be damaged. Therefore, the following mitigations will be implemented to reduce the potential impact to any mature or specimen trees from this proposed plan to a less than significant level.

MITIGATION MEASURES BIO-5 (TREES)

- Equipment operators shall be required to avoid striking retained trees to minimize damage to the tree structure or bark. Contract specifications shall establish fines for any damage to retained trees and fines shall be levied on the contractor for such damage.

- b) Some work will occur in riparian corridors at stream crossings. However, equipment will be working within existing road alignments at the crossings and will only affect previously impacted areas. Equipment will remain on existing road alignments and crossing fill areas to the maximum extent practicable. Therefore this plan with the following mitigation will have a less than significant impact to any riparian habitat or other sensitive natural community.

MITIGATION MEASURES BIO-6 (RIPARIAN)

- Riparian reforestation utilizing the NCRD genetic integrity guidelines (Appendix E) shall be implemented within stream crossings and adjacent to watercourses. All disturbed areas within 30 meters of the channel centerline will be reforested with native species. Trees shall be planted on approximate 20-foot centers in a random distribution.
- Reforestation efforts shall be monitored during the second and third years (post-planting) to determine success of reforestation efforts. An 80% survivability rate shall be obtained. If the survival rate of the seedlings is less than 80% during the second or third year of monitoring then additional seedlings shall be planted to obtain the targeted success rate.

- c) Technical assistance was requested in past projects similar in scope and design to this plan from the U.S. Army Corps of Engineers (USACE or Corps). The Corps determined that "...a Department of the Army authorization will not be required since the activity will not involve the discharge of dredged or fill material into a water of the United States, including wetlands, pursuant to Section 404 of the Clean Water Act." No fill will be placed on springs, seeps, or wetlands. Therefore, this plan will have no impact on any federally protected wetlands.
- d) This plan will have less than significant impact on the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors. The relatively small area under construction at one time will allow migration around active construction sites. Stream crossing removal will generally take place in streams that are dry or have flow below that required for fish migration.
- e) No local policies protecting biological resources currently exist. No impact.
- f) The plan will not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan because none exist for any project location. No impact.

V. CULTURAL RESOURCES

ENVIRONMENTAL SETTING

The Crescent City area is home to the Tolowa Indians who lived in approximately eight villages along the coast, with seven of them containing as many as 300 persons each (Gould 1978). The Tolowa were in regular contact with neighboring tribes such as the Yurok, Karok, Hupa, and Tututni. They participated in ceremonial interactions with these tribes as well as trading, which extended north to the interior of Oregon and along the Pacific coast as far as Puget Sound, Washington. Unlike the tribes to the north and south, the Tolowa settled primarily along the coast and did not frequently use inland areas due to the rugged and heavily forested terrain of the Smith River area. The Tolowa used the Mill Creek area for resource collection, including but not limited to basketry supplies, timber for canoe and shelter construction, and food (Interim Management Recommendations, October 2002).

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
WOULD THE PROJECT:				
a) Cause a substantial adverse change in the significance of a historical resource, as defined in §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource, pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

DISCUSSION

- a) Cultural resources will be inventoried prior to operations within the project area and reports will be submitted to and reviewed by DPR Cultural Resource staff at the Northern Service Center. A PCR 5024 shall be completed. A Cultural Resource Investigation report will be prepared by a qualified Archeological consultant with direct oversight by State Park Cultural Resource staff prior to any construction activities. Included in the report will be cultural resource sites and recommendations for avoiding impacts to those sites will be identified and located. The report may contain confidential information and is not available for public review. Special accommodations can be made to review the report by request from the Cultural Resources Division of California State Parks. Implementation of Mitigation Measures CULT-1 below will reduce any potential impact to a less than significant level.

MITIGATION MEASURES CULT-1

- Prior to any operations in a given area a qualified archaeologist shall conduct an investigation of the project area to determine the presence of any archaeological or historical resources (cultural resources). If a contractor is used then the contractor shall be required to first obtain a cultural investigations permit from the DPR Cultural Resource Program. A report documenting the location and type of any cultural resources determined shall be developed and submitted to the DPR Cultural Resource Program and the District's Senior Resource Ecologist. Based on the results of the report a 5024 shall be developed.
- The District's preferred method of addressing potential impacts to cultural resources is through avoidance. Therefore, if any cultural resources are detected as part of the investigation a minimum 25 foot equipment exclusion zone shall be established around the resource. The District reserves the right to alter this measure through the 5024 process.
- In the event that previously undocumented cultural resources are encountered during project construction (including but not limited to dark soil containing shellfish, bone, flaked stone, groundstone, or deposits of historic trash), work within the immediate vicinity (500 feet) of the find will be temporarily halted or diverted. Work would not continue at the site until a DPR-qualified cultural resource specialist evaluates the find and then designates and implements appropriate treatment and disposition of the artifact(s).

- If any significant cultural resources are found in a project location, a DPR-qualified historian, archaeologist and/or appropriate Native American Tribal representative will monitor any ground-disturbing work in that area from that point forward.

- b) No archeological resources have been identified within the project area. No impact is anticipated, but if any archaeological resources were encountered, implementation of Mitigation Measure CULT-1 above will reduce the impact to a less than significant level.
- c) No human remains or burial sites have been documented or are known to exist at the proposed project sites. No impact is anticipated, but if any human remains or burial artifacts are identified, implementation of Mitigation Measures CULT-2 below will reduce the impact to a less than significant level.

MITIGATION MEASURES CULT-2

- In the event that human remains are discovered, work shall cease immediately in the area of the find and the project manager/site supervisor will notify the appropriate DPR personnel. Any human remains and/or funerary objects shall be left in place or returned to the point of discovery and covered with soil. The DPR Sector Superintendent (or authorized representative) will notify the County Coroner, in accordance with §7050.5 of the California Health and Safety Code, and the Native American Heritage Commission (NAHC) or Native American Tribal representative. If a Native American monitor is on-site at the time of the discovery, the monitor will be responsible for notifying the appropriate Native American authorities.
- If the coroner or tribal representative determines the remains represent Native American interment, the NAHC in Sacramento and/or tribe will be consulted to identify the most likely descendants and appropriate disposition of the remains. Work shall not resume in the area of the find until proper disposition is complete (PRC §5097.98). No human remains or funerary objects will be cleaned, photographed, analyzed, or removed from the site prior to determination.
- If it is determined the find indicates a sacred or religious site, the site shall be avoided to the maximum extent practicable. Formal consultation with the State Historic Preservation Office and review by the NAHC/Tribal Cultural representatives shall also occur as necessary to define additional site mitigation or future restrictions.

VI. GEOLOGY AND SOILS

ENVIRONMENTAL SETTING

The MCA is located in the Northern California Coast Range and the Western Klamath Mountains Province, expressed as northwest trending mountains and valleys formed by the convergence of the Gorda and North American tectonic plates. The bedrock within the Coast Range consists of Franciscan Broken Formation. These rocks are tectonically fragmented interbedded greywacke, shale and conglomerate (Blake and Jones, 1974). Highly sheared serpentinite and peridotite of the Klamath Mountains Province underlie the northeastern portion of the project area (Madej et. al., 1986). The Coast Range and Klamath mountain provinces are separated by the coast range thrust fault.

Geologic activity, soil types, and high levels of rainfall have created steep and potentially unstable slopes. Land use and the construction of poorly designed roads have destabilized some slopes and are presently contributing to additional instability. Moderate to high seismic activity can be expected in this area, with associated ground shaking, block-falls, and liquefaction of saturated sediments.

The soils of MCA are derived from the Franciscan Formation with some occurrence of Tertiary fluvial deposits along Childs Hill and Little Bald Hills. The Franciscan Formation includes primarily sedimentary rock, along with some igneous and metamorphic rock material. The principal rock material is greywacke, highly variable sandstone with angular medium-sized grains, mixed with shale and siltstone. Igneous and metamorphic rocks are also combined in the substrate in some areas. The shale has a high proportion of angular mineral and rock fragments, with only a small amount of clay materials.

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
WOULD THE PROJECT:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map, issued by the State Geologist for the area, or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable, as a result of the project and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1997), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

disposal systems, where sewers are not available for the disposal of waste water?

- f) Directly or indirectly destroy a unique paleontological resource or site, or unique geologic feature? ☐ ☐ ☐ ☒

DISCUSSION

- a) While the chance of the rupture of a known earthquake fault, strong seismic ground-shaking, seismic-related ground failure, or landslides are certainly possible in this area, this plan will not substantially increase the exposure of people or structures to risk of loss, injury, or death as a result of these events. The proposed plan will not add any element or structure that will increase public exposure. Although those working on the plan will be exposed to any event that might occur, the MCA lies within a seismically active region. Exposure for most of the employees will be similar whether working on the plan or simply living and working in the surrounding county. In fact, the time-weighted average exposure to seismic hazards is less at the rehabilitation site than it would be in an urban or suburban setting. Due to the remote location of the rehabilitation plan, the seismic effects on the plan area are unlikely to affect park visitors or staff not directly involved at the site.

Treatments proposed by this plan will reduce mass wasting and surface erosion (landslides and mudflows), by eliminating the anthropogenic cause of these problems (e.g., roads, landings, and stream crossings). Treatments are designed to restore natural fluvial and riparian topography and surface hydrology, thereby increasing the stability of the rehabilitation sites.

Inspectors trained in landform rehabilitation will conduct direct oversight of the work to ensure that the treatment designs are complete, have a stable geometry, and blend well into the surrounding natural topography. Conditions for seiche or tsunami do not exist because road removal locations are inland from water bodies. No volcanic hazards exist in the project vicinity. Less than significant impact.

- b) The purpose of the proposed work is to reduce soil erosion by restoring the natural topography and hydrology of the area. A temporary increase in surface erosion may occur at some locations because fill is re-exposed as part of the rehabilitation, but the loss should not be substantial. Topography will change from the existing disturbed condition; imprudent grading, excavation, or fill placement during the rehabilitation could initially affect natural topography. Minor side casting of mineral soil may bury some undisturbed topsoil downslope from the rehabilitated road; however the comparatively larger area of restored slope limits this impact. Overall, the work will diminish erosion.
- c) The plan is located within a geologic unit with unstable soil; however, the goal of the plan is to stabilize the slopes and reduce the potential for landslides and lateral spreading associated with landslide head-scarps. The general public and most DPR employees will not be exposed to any additional geologic hazard as a result of this proposed project. The Roads, Trails, and Resources Section Engineering Geologist has reviewed the project and identified sites with potential instability. Liquefaction of recontoured material could occur if ground shaking took place during periods of high soil moisture. However, in such a situation, soils throughout the park will be susceptible to liquefaction and hazards from road treatments will only be slightly higher than other parts of the park. The plan does not create conditions that will cause subsidence because all organic materials are removed before fill placement against cut banks. Soil and geologic conditions that could result in subsidence may exist at a few of the project sites. Removing buried organic material and removing fill material that may be susceptible to subsidence will stabilize these sites. The plan will have a less than significant impact on geologic instability and, with implementation of the following mitigation (Geo-1), adverse impacts to worker safety due to existing geologic instability will also be reduced to a less than significant level.

MITIGATION MEASURE GEO-1
<ul style="list-style-type: none">• All workers shall be advised of high-risk areas and cautioned to use extreme care while working in those areas.• All heavy equipment operators shall be required to have experience working in conditions similar to the proposed project.

- A qualified inspector, trained in landform rehabilitation, shall monitor equipment operation.
- Hand crews or other workers on the ground shall be required to position themselves upslope of sites where excavations are actively under construction.
- Heavy equipment operators shall be cautioned to minimize their exposure to unstable slopes that may occur naturally or result from the earthmoving process. Inspectors shall continually evaluate slope geometry and caution operators if unstable conditions are indicated.

- d) Expansive soils do not exist in the plan area. No structures are being constructed. No impact.
- e) No septic tanks or waste disposal systems will be constructed or impacted for this plan. No waste disposal systems exist at the plan sites. No impact.
- f) There are no known unique paleontological resources or sites or unique geologic features in the plan area. No impact

VII. HAZARDS AND HAZARDOUS MATERIALS

ENVIRONMENTAL SETTING

There are no known hazardous materials within the plan area. During timber operations of the previous landowners, hazardous materials were used and stored near the mill site. No fuel storage facilities exist within or adjacent to the project area. Park employees will transport diesel to sites where heavy equipment is operating. No airports are located within two miles of the project site.

Physical hazards in the MCA are similar to any outdoor setting and include steep slopes, rushing water, poison plants, wild animals, disease carrying insects, and inclement weather. The plan area is in a remote portion of Del Norte County and transportation to the nearest hospital would require an hour drive time from some locations. No airstrips exist within the park or adjacent to park property. Helicopter landing locations have been identified and geo-referenced throughout the park. U.S. Coast Guard helicopters patrol the coastline on a regular basis.

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
WOULD THE PROJECT:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials, substances, or waste into the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites, compiled pursuant to Government Code §65962.5, and, as a result, create a significant hazard to the public or environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport? If so, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be located in the vicinity of a private airstrip? If so, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury, or death from wildland fires, including areas where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

DISCUSSION

- a) The proposed plan does not involve the disposal of hazardous materials. However, the plan does involve the routine transportation of small amounts of diesel fuel to the work site. Construction activities will require the use of certain potentially hazardous materials, such as fuels, oils, and solvents. These materials are generally used for excavation equipment, generators, and other construction equipment and will be contained in vessels engineered for safe storage. Large quantities of these materials will not be stored at the construction site. Spills, upsets, or other construction-related accidents could result in a release of fuel or other hazardous substances into the environment. The mitigations indicated in HAZMAT-1 below will reduce the potential for adverse impacts from these incidents to a less than significant level.

MITIGATION MEASURES HAZMAT- 1

- All equipment will be inspected for leaks immediately prior to the start of construction, and regularly inspected thereafter until equipment is removed from park premises. Leaks that develop will be repaired immediately in the field or work with that equipment will be suspended until repairs could be made.
- The contractor(s) will prepare an emergency spill response plan prior to the start of construction. DPR will ensure that the contractor maintains a spill kit on-site throughout the life of the project, or provides multiple sets of cleanup materials to each crew, if sharing will prevent timely implementation of cleanup plans. In the event of any spill or release of any chemical in any physical form on or immediately adjacent to the project sites or within the MCA during construction, the contractor will immediately notify the appropriate DPR staff (e.g., project manager or supervisor). Appropriate agencies will be notified in the event of significant spillage.
- No maintenance or fueling activities shall be permitted within 200 feet of a stream.
- Equipment will be cleaned and repaired (other than emergency repairs) outside the park boundaries. All contaminated water, sludge, spill residue, or other hazardous compounds will be disposed of outside park boundaries, at a lawfully permitted or authorized designation.

- b) Failure of, or leakage from, vehicles or heavy equipment could result in the release of hazardous substances (primarily petroleum based products) to the ground or water, (see VII(a) discussion above). Mitigation measure Hazmat-1 will reduce the potential for adverse impacts to a less than significant level. Discarded barrels may be discovered in the work area and may containing unknown potentially hazardous substances. Abandoned vehicles may also be found within the planned project sites. Implementation of the following mitigation measures, in conjunction with Hazmat-1 above, will reduce any potential impacts related to these finds to a less than significant level.

MITIGATION MEASURES HAZMAT-2

- If there is evidence of spillage from or free product discovered on or adjacent to the project sites, work will be halted or diverted from the immediate vicinity of the find and the Sector's hazardous materials coordinator will be contacted. Hazardous materials, if present, will be contained and removed from the site prior to resumption of work. Removal of all contaminants, including sludge, spill residue, or containers, will be conducted following established DPR procedures and in compliance with all local, state, and federal regulations and guidelines regarding the handling and disposal of hazardous materials.
- Abandoned vehicles located within the project sites will be removed and disposed of under the supervision of the hazardous materials coordinator.

- c) The plan area is not located within one-quarter mile of any school and no schools are proposed for this area. No impact.
- d) The road treatment sites in the MCA are not included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5. Therefore, no impact will occur with project development.
- e) The planned project sites are not located within two miles of a public use airport. Therefore, no impact will occur as a result of this plan.

- f) The planned project sites are not located within the vicinity of a private air strip. Therefore, no impact will occur as a result of this plan.
- g) All construction activities associated with the plan will occur within the boundaries of the MCA and work will not restrict access to or block any public road. Access to the project sites is limited and the roads proposed for treatment are not part of any emergency response or evacuation plan. A general safety protocol for backcountry heavy equipment operations has been adopted by the NCRD for use within state parks, including the MCA, and will be implemented as part of this project. This protocol outlines broad safety issues common to all projects and presents guidelines on how to address those issues. It also requires project managers to develop a project specific safety plan for each rehabilitation project within the plan, including the identification of any existing emergency response plans. The plan is designed and will be implemented to avoid any conflicts with existing plans or increase in emergency response time. Emergency response requirements for this project will be no greater than for any other backcountry activities.

Workers spend most of their work hours in remote wildland settings and may be exposed to natural hazards consistent with that environment (e.g., wild animals, insects, noxious plants, lightning, wind, etc.). However, all State employees are issued first aid kits and are trained how to respond to anticipated and unanticipated incidents. Employees are also asked to disclose any sensitivity that might affect their employment tasks or increase the potential need for emergency medical care. Therefore, the impact of this plan on an emergency response or evacuation plan will be less than significant.

- h) Heavy equipment can get very hot during the warmer part of the work season and is sometimes in close proximity to flammable vegetation. Improperly outfitted exhaust systems or friction between metal parts crushing rocks could generate sparks. The safety plan developed for each project is reviewed by all project staff and includes job site characteristics to reduce the potential for fire. The following mitigations will reduce the potential for adverse impacts from these incidents to a less than significant level.

MITIGATION MEASURES HAZMAT-3
<ul style="list-style-type: none"> • A fire safety plan will be in place prior to the start of any construction, including availability of identified fire suppression equipment and any required employee training. • Spark arrestors or turbo-charging (which eliminates sparks in exhaust) and fire extinguishers will be required for all heavy equipment. • Construction crews will be required to park vehicles away from flammable material such as dry grass and brush. At the end of each workday, heavy equipment will be parked over mineral soil to reduce the chance of fire. All equipment will be required to be mechanically sound and free of flammable debris. • Park staff will be required to have a State Park radio on site, which allows direct contact to California Department of Forestry and Fire Protection and centralized dispatch center, to facilitate the rapid dispatch of control crews and equipment in case of a fire.

VIII. HYDROLOGY AND WATER QUALITY

ENVIRONMENTAL SETTING

Water quality in the MCA ranges from extremely clear and free of any pollutants, in streams that drain from old growth forests, to turbid, very poor quality in areas previously impacted by humans. The North Coast Regional Water Quality Control Board (RWQCB) regulates water quality in the area of California where the park is located.

Precipitation in the park occurs primarily in the six months from November through April. Summer showers are infrequent, with winter rainfall accumulations of up to 80 inches. During the summer months, a thick fog frequently blankets the coastal areas. The prevailing wind direction is northwesterly during the spring, summer, and fall and shifts to southeasterly during the winter season. Wind speed along the coast is typically 15 to 25 mph, with gusts up to 50 mph during winter storms.

Groundwater in the park is relatively free of pollutants and considered very high quality because very few potential pollution sources exist. The groundwater table in the park fluctuates annually, depending on rainfall and seasonal temperatures. The groundwater table varies throughout the area because of the geological or topographical influences. The area does not serve to recharge commercially available aquifers. There are no public water sources in the area impacted by the proposed plan.

Watershed scientists have long recognized the impact of road building associated with logging activities throughout watersheds in the Pacific Northwest. Abandoned logging roads and poorly designed legacy service roads in the MCA watersheds are causing accelerated erosion and sediment delivery to the drainage network. Quantitative field assessments throughout the watersheds have revealed that disrupted surface hydrology is the primary agent, causing accelerated erosion from failed stream crossings, landslides from diverted runoff, and severe gullying of abandoned road surfaces.

California State Parks has conducted numerous watershed rehabilitation projects in the North Coast Redwoods District to reduce road related failures in the past. Ongoing qualitative review and reporting on past projects has revealed increased slope stability, reduction in soil erosion, a reduction in sediment sources, rapid natural revegetation, and increased aquatic habitat in watersheds where road removal activities have occurred. State Parks, Redwood National and State Parks, the Bureau of Land Management (BLM), USFS, and numerous private engineering firms have conducted research and road rehabilitation, and have documented similar results in other watersheds. The results of the ongoing road rehabilitation work indicate high levels of success in improving hydrologic and geomorphic function, and enhancing aquatic and terrestrial habitat.

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
WOULD THE PROJECT:				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge, such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

the site or area, including through alteration of the course of a stream or river, in a manner which would result in substantial on- or off-site erosion or siltation?

- | | | | | | |
|----|--|--------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| d) | Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in on- or off-site flooding? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| e) | Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) | Substantially degrade water quality? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| g) | Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map, or other flood hazard delineation map? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| h) | Place structures that would impede or redirect flood flows within a 100-year flood hazard area? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| i) | Expose people or structures to a significant risk of loss, injury, or death from flooding, including flooding resulting from the failure of a levee or dam? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| j) | Result in inundation by seiche, tsunami, or mudflow? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

DISCUSSION

- a) The plan will be in compliance with all applicable water quality standards and waste discharge requirements. (See Section VII, Hazards and Hazardous Materials, above, regarding potential impacts from accidents, spills, or upset.) Implementation of the plan will result in a net decrease in non-point source pollution. Road rehabilitation is a specific management measure for the control of polluted runoff by the California Water Resources Control Board. The plan is designed to reduce surface erosion and information generated by this and similar projects are assisting the State in developing techniques to achieve the Total Maximum Daily Load (TMDL). Project work will be accomplished during the dry season, further lessening any chance of impact to surface water quality. The plan scope does not include waste discharge work of any kind. Plan location, design, and timing, in combination with the Hazmat mitigation measures indicated above for accidental hazardous material exposure, will result in a less than significant impact to water quality and waste discharge.
- b) The plan will not substantially deplete groundwater supplies or interfere substantially with groundwater recharge. Any water drafting by water trucks will be in compliance with requirements of the stream alteration agreement and Water Drafting Specifications from NOAA Fisheries (2001). Groundwater quantity may be influenced by changes in surface drainage patterns and/or changes in porosity of earth materials at fill sites. Increasing surface flows in certain locations through reconnection of channels will alter existing groundwater conditions at both the reconnected and the abandoned channel site. Newly restored fills will experience a period of interactive adjustment to groundwater flows as the fills consolidate over time; however, in the long term, both the fill and groundwater flows will evolve toward their pre-disturbance patterns. Fills will be compacted during their placement to speed this process of consolidation. Changes in the direction or rate of groundwater flow may be influenced by changes in surface drainage patterns. However, a qualified engineering geologist will review the sites to ensure that site and offsite conditions will be enhanced by the work (i.e., reestablishing pre-disturbance conditions within limits of post-disturbance change). Substantial short-term reductions in the amount of groundwater otherwise available for public water supplies will not occur as a result of the project, and the amount of groundwater will eventually increase, due to the elimination of compacted road surfaces. Mill Creek sub-watersheds are not used for any public water supply and no Park water systems will be impacted. The water table adjacent to the crossing excavation may be lowered as

saturated crossing fill is removed from the stream channel; however, this effect will be localized around the crossing site. Prior to construction, park staff familiar with the location of waterlines will clearly mark the location of water systems or will show the project inspector personally. Impact of the project on groundwater supplies will be less than significant.

- c) Existing (altered) drainage patterns generally will be restored to pre-disturbance patterns. In some cases, where pre-disturbance patterns cannot be restored, rehabilitation work may require the realignment of a stream segment. Reconnecting diverted streams to their natural flow pattern will increase discharge in abandoned channels. However, significant geomorphic adjustments are not likely to occur due to the increased discharge, because the reoccupied channels had originally formed under the post-treatment flow regime. Offsite effects of reestablishing pre-disturbance drainage patterns and discharge have been evaluated to ensure increased discharge will not adversely impact fluvial geomorphic functioning downstream. The following mitigations will reduce the potential for adverse impacts to a less than significant level.

MITIGATION MEASURES HYDRO-1

- Cutbanks exposing seeps or springs will not be recontoured. Instead, the embankment fill adjacent to the wet area will be exported to nearby dry sections of the road. An outsloped cutbench will extend along all wet road sections. No vegetation will be removed within 25 feet of a spring that emanates from a cut slope.
- If a long section of road were not suitable for full recontouring, the excavator will remove the embankment fill and load it into a dump truck to be end-hauled to a stable location on a nearby site proposed for recontouring. The excavator and dozer will recover the entire embankment fill and outslope the cutbench of the road. On steep linear road grades, broad swales will be constructed along the road at appropriate locations to convey flow into natural drainage features below the road.
- Road sections immediately adjacent to stream crossings will not be fully recontoured. Instead, the fill will be tapered toward the crossing and the cutbank laid back to a more stable slope. This reduces the slope on each side of the crossing, decreasing the chance for direct sediment delivery if a post-treatment slope failure should occur.
- If the stream has running water, it will be diverted away from excavation areas to reduce turbidity and returned to the channel immediately downstream. Where channel widths are wide enough, a berm will be constructed to divert water away from the work area. Where channels are narrow, a small diversion dam will be built upstream and stream flow piped around the worksite and discharged into the stream below the worksite. Instream filters will be installed where diversion is not possible. The project inspector will carefully monitor the structures to prevent failures.
- If the crossing has already partially failed, a small road bench will be reconstructed along the upstream end of the crossing to allow access to both sides of the crossing. A minimal amount of fill will be used and streamflow (if present) piped around the site or a culvert installed to convey streamflow under the temporary road.
- Logs and rocks will not be placed in the excavated channel because they cause lateral migration resulting in bank erosion. Instead, logs will be placed on the channel margins or span the removed crossing.
- All temporary berms, ponds, and piping will be completely removed at the completion of construction.

- d) The plan is designed to reduce peak runoff events and, combined with completion of the work during the dry season, will eliminate the possibility of project-related flooding on- or off-site. The work will significantly reduce compacted surfaces, increasing soil permeability and allowing rainwater to percolate into the soil. The work will eliminate unnatural concentrations of flow onto unstable slopes, thereby reducing peak runoff events. Runoff will be more naturally dispersed across the landscape and restored to natural flow paths (see Mitigation Measures HYDRO-1 above). Although alterations of existing drainage patterns will occur as a result of this plan, the intent of the plan is to restore natural, pre-disturbance patterns that correct destructive flow. The mitigation measures referred to above will reduce potential impacts to a less than significant level.
- e) The plan will not create or contribute runoff water in amounts that will exceed the capacity of existing or planned stormwater drainage systems, or provide substantial additional sources of polluted runoff. (See Discussion VIII(d) above.) No stormwater systems exist downslope from the project. No impact.
- f) The plan, in and of itself, reduces soil erosion and sediment inputs to streams, thereby improving water quality once construction is complete and natural revegetation has occurred. However, there is the potential for short-term sedimentation and the accidental spillage of toxic substances (e.g., diesel fuel and hydraulic oil) during the construction process.

Diesel fuel and hydraulic oil are used in the heavy equipment, and are transported each day to the project site, using truck-mounted tanks. Diesel fuel is pumped from the truck to the equipment daily and involves a low potential for spillage. Hydraulic oils will be transported in five-gallon buckets, and will be available on-site, should accidental hose rupture require equipment oil tanks to be refilled. The potential to degrade water quality with these products is small because of the comparatively small volumes used at one time. Fuel spills could occur if a piece of equipment crashed or overturned. The likelihood of this occurring is low because of operator experience requirements. Oil spills may also occur during stream channel excavations. However,

these are usually the result of limbs from trees becoming entangled in excavator hydraulics, and crossings generally are more open and have less potential for entanglement. (See Mitigation Measures Hazmat 1-3 regarding potential impacts from accidents, spills, or upset.)

Storm flow turbidity levels in the MCA tributaries are high, due to past watershed disturbances, and the minor surface erosion of recontoured slopes and stream channel adjustments will have a small effect on turbidity levels. Short-term increases of turbidity may occur; however, long-term rates of turbidity will be higher without the work. The cumulative effect of crossing removal is an overall decrease in turbidity and improvement of aquatic habitat. Work may occur in flowing streams as part of culvert or crossing removal. Flow in most crossings is generally very low during the projected work period (late summer/early fall) and precautions will be taken to minimize exposure of equipment and personnel to flow. The average length of stream channel affected by crossing removal is approximately 100 feet in length. The work will also be spread over a six-year period, so that turbidity impacts to all of the Park's watersheds will be spread out over time.

Water quality will be improved as the rehabilitation process is implemented within an impacted watershed. However, a short-term increase in suspended sediment and bed load will occur downstream of the rehabilitation sites that are directly adjacent to streams, following rehabilitation work. The effects will be limited to the first winter following treatment and, in most cases, to the first runoff-generating event of the winter. The minor surface erosion of recontoured slopes and stream channel adjustments will have minimal effect on current sediment levels. The effect on aquatic habitat will be apparent immediately downstream of the rehabilitation sites, but based on repeated observations of past sites, typically will not extend more than several hundred feet downstream. Sediment delivery from road segments not directly adjacent to streams will be captured by native in-situ mulch and micro-topography. Long-term transport rates of suspended load and bed load will be higher without rehabilitation work in other parts of the watershed (Madej, 2000). The cumulative long-term effect of removing stream crossings on water quality will be a reduction in suspended and bed load transport, improved fluvial-geomorphic functioning, and an improvement in the aquatic habitat throughout the drainage network.

Adaptive management through monitoring of treatment sites is an integral component of the NCRD's road rehabilitation program. All stream crossing sites will be photo documented following treatment. The photo documentation will allow assessment of post treatment responses so that refinements could be made to treatment techniques in on future projects. In addition, all treatment sites are reviewed during the winter following treatment and as needed during subsequent winters to monitor potential post-treatment adjustments.

Implementation of the following mitigation measures, in conjunction with those in HAZMAT-1-3 and GEO-1 will reduce the plan's potential adverse impacts to a less than significant level.

MITIGATION MEASURES HYDRO-2
<ul style="list-style-type: none"> • Following October 15th of any work year, any roads remaining open to service vehicles will be winterized by installing rolling dips at all stream and swale crossings; portions of the outside berm will be removed to allow drainage and any unstable fill will be pulled back from stream crossings. • Following October 15th of any work year, work will not proceed in any area where soils have become saturated. Construction work will generally be limited to the dry periods of the year, when rain is unlikely. • All stream crossing sites will be photo-documented following treatment to enable rough-estimate, quantitative assessment of post-treatment adjustments. Selected stream crossing sites will be reviewed in the field during the first winter following treatment to identify any deficiencies in treatment or treatment techniques.

g,h) The plan does not involve housing or construction of any structure designed for human occupation. No impact.

i) The plan will not expose people or structures to a significant risk of loss, injury, or death from flooding, including flooding resulting from the failure of a levee or dam. The plan is designed to reduce downstream flooding and no levee or dam is involved with the plan. Only small sediment filters and collection pools for temporary water diversion around construction sites will be used. The plan reduces the potential for future catastrophic flood events in the Mill Creek sub-watersheds by reducing peak discharge and reducing sediment sources. No adverse impact.

- j) The plan will not result in inundation by seiche, tsunami, or mudflow because the sites are located above 400 feet in elevation, are inland from any water body, and will be designed to limit the risk of mudflow through application of geologic engineering techniques. Work will occur during dry periods or non-saturation to limit workers exposure to mudflow. The plan is designed to eliminate the potential for mudflow by compacting recontoured fill, placing fill away from springs or seeps, and/or placing fill on a flat, de-compacted surface. Less than significant impact.

IX. LAND USE AND PLANNING

ENVIRONMENTAL SETTING

The proposed plan is located within the boundaries of the Mill Creek Acquisition, which is unclassified at this time. The intended purpose of land is to preserve outstanding natural, scenic, and cultural values, and indigenous aquatic and terrestrial fauna and flora. No General Management Plan exists currently for the unit, but DPR's Departmental Operations Manual, Section 0300 defines the goals and objectives of restoration of natural resources. The area is zoned for recreation in Del Norte County. In addition to resource preservation, the park will be used for public recreation. The project sites are located in areas that are undeveloped and not used by visitors.

The Mill Creek property is a 103 km² (40 mi²) area located approximately 10 km (6 mi) southeast of Crescent City in Del Norte County. The property directly links large areas of old-growth coast redwood forest within Redwood National and State Parks with National Forests located in the western Klamath-Siskiyou Mountains. The property is bordered by Jedediah Smith Redwoods State Park to the north, Del Norte Coast Redwoods State Park to the west, Six Rivers National Forest to the east, and private industrial timber lands to the south (Figure 1-1). The property encompasses a large portion of the Mill Creek watershed (60 km² [23 mi²]) tributary to the Smith River, a large portion of the Rock Creek watershed (31 km², 12 mi²) tributary to the South Fork Smith River, and small headwater portions of the Terwar (2.6 km², 1.0 mi²), Hunter (1.1 km², 0.4 mi²), and Wilson (5.3 km², 2.0 mi²) Creek watersheds.

Miller Timber Company bought the Mill Creek tract from Hobbs, Wall, & Company in the early 1940s and the Rock Creek tract from Jones Timber Company around 1965. Between 1954 and 2000, the property was intensively managed for commercial timber harvest that included constructing an extensive road network and converting most of the property from old-growth to early-successional coniferous forest. Approximately 40.5 ha (100 ac) of old-growth redwood and Douglas-fir forest presently occur in five separate stands. In 2001, Save-The-Redwoods-League negotiated an option to purchase the 103 km² (40 mi²) Mill Creek property from Stimson Lumber Company (Stimson). Sale of the property was finalized in June 2002, at which time the entire property transferred to State ownership under stewardship of the California Department of Parks and Recreation (DPR).

Following acquisition, Stillwater Sciences, under contract to SRL and the California Coastal Conservancy, developed the Interim Management Recommendations (IMR) to guide protection, restoration, and public use of the Mill Creek property until DPR adopts a General Management Plan for the area. The IMR for the Mill Creek property describe specific interim management objectives and recommended actions for attaining these objectives. Objectives and recommendations were developed to prioritize future management actions and provide information necessary to comply with CEQA and related legislation required for implementation of site-specific projects.

Several past and present plans address natural resource management of the Mill Creek property or adjacent public lands. These plans were reviewed during the development of these IMR and are described briefly below.

Stimson Lumber Company prepared a Draft Multi-Species Habitat Conservation Plan (HCP) for timberlands in Del Norte County in support of an application for an Incidental Take Permit under the Endangered Species Act and a 2081(b) permit under California Endangered Species Act (Stimson Lumber Company 1998). The draft HCP summarized existing physical and biological information for the property, as well as potential impacts to threatened, endangered, and other special-status species that could result from timber harvest activities. The draft HCP did not undergo a public review process and was not finalized by Stimson or federal and state agencies.

The Smith River National Recreation Area (SRNRA) was established as part of the Six Rivers Land and Resource Management Plan (SRLRMP) to "ensure the preservation, protection, enhancement, and interpretation of the Smith River's wild and scenic rivers, ecological diversity, and recreational opportunities while providing for wise use and sustained productivity of its natural resources" (USDA Forest Service 1995). The SRLRMP provides management guidance for a 10- to 15-year interim period.

The Smith River Anadromous Fish Action Plan was prepared by the Smith River Advisory Council to maintain and enhance anadromous fish populations in the Smith River (SRAC 2002). The plan addresses anadromous salmonid habitat quality and quantity, watershed conditions, and public land management in the Mill Creek area.

Goals established in the plan include (1) assessing watershed conditions in the Smith River estuary and tributaries, (2) identifying existing data gaps, (3) formulating management and monitoring recommendations, (4) maintaining natural resource-based economies, and (5) community participation in natural resources management and restoration.

Redwood National Park, Jedediah Smith Redwoods State Park, Del Norte Coast Redwoods State Park, and Prairie Creek Redwoods State Park are cooperatively managed under a Memorandum of Understanding (MOU) between the NPS and DPR (RNSP 1996). The MOU includes lands within the congressionally authorized boundary of Redwood National Park, now collectively referred to as Redwood National and State Parks. Joint state and federal management is intended to enhance protection of park resources and improve public service using combined state and federal resources. A General Management Plan and Environmental Impact Statement/Environmental Impact Report were prepared by the Redwood National and State Parks to provide "a defined, coordinated direction for resource preservation and visitor use and a basic foundation for decision making and managing for the following 15 to 20 years" (RNSP 1999). The joint plan, approved in 2000, covers approximately 165 mi² and focuses on park establishment, cooperative management of park resources, and the visitor experience.

Throughout the Redwood National and State Parks, second-growth conifer forests have established following timber harvest that occurred prior to state and federal acquisition (RNSP 1996). Late-successional forest characteristics and associated ecological values are generally lacking and develop slowly in these dense second-growth forests. RNSP developed a Draft Second-Growth Forest Recovery Plan with the goal of accelerating recovery of late-successional characteristics in these areas through silvicultural treatments. The draft plan assesses the benefits and potential impacts of vegetation management alternatives, including a no treatment alternative.

The Del Norte county General Plan presents the Mill Creek Acquisition as Federal and State Land but does not specifically address activities or management goals for the property.

		<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
WOULD THE PROJECT:					
a)	Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b)	Conflict with the applicable land use plan, policy, or regulation of any agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c)	Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

DISCUSSION

- a) The plan will not physically divide an established community because no community exists within the plan boundary. No impact.
- b) The plan will not conflict with any land use plan, policy, or regulation of any agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect. In general, this project is designed to meet a critical resource protection need, and no land use plans have been implemented to regulate road removal. State and federal laws regulate environmental and worker safety aspects of the construction; however, the plan will be consistent with all applicable laws and regulations. The area is zoned for recreation, but the plan will not impact recreational uses because it is in a portion of the park with very low use. Improving the aesthetic qualities of the site will enhance recreation. No impact.

- c) The plan will not conflict with any applicable habitat conservation plan or natural community conservation plan because no such plans have been adopted. No impact.

X. MINERAL RESOURCES

ENVIRONMENTAL SETTING

No significant mineral resources have been identified within the boundaries of the MCA. Mineral resource extraction is not permitted within State Park property.

		<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
WOULD THE PROJECT:					
a)	Result in the loss of availability of a known mineral resource that is or would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b)	Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

DISCUSSION

- a) The plan will not result in the loss of availability of a known mineral resource because no known mineral resources exist within the park. No impact.
- b) The plan will not result in the loss of availability of a locally important mineral resource recovery site because none exist within the park. No impact.

XI. NOISE

ENVIRONMENTAL SETTING

The MCA is located in rugged forested terrain in northern California, surrounded by steep mountains and the Pacific Ocean.

Existing noise affecting the project area results from administrative use on park roads and occasional air traffic consisting of small private planes, Coast Guard helicopters, and CDF firefighting aircraft.

This park contains special status animal species that can be adversely affected by excessive noise during their nesting and breeding seasons. The USFWS has developed guidelines for eliminating noise impacts to threatened and endangered wildlife species in this area. These guidelines include seasonal restrictions on the use of heavy equipment in potential habitat and/or during periods of nesting or the early phase of rearing of young. These restrictions apply to any use of heavy equipment throughout the region. The USFWS will provide technical assistance on this project regarding noise impacts prior to construction implementation. The USFWS staff has visited all recent road rehabilitation projects proposed by the North Coast Redwoods District, has been consulted regarding this project.

		<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
WOULD THE PROJECT:					
a)	Generate or expose people to noise levels in excess of standards established in a local general plan or noise ordinance, or in other applicable local, state, or federal standards?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b)	Generate or expose people to excessive ground borne vibrations or ground borne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c)	Create a substantial permanent increase in ambient noise levels in the vicinity of the project (above levels without the project)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d)	Create a substantial temporary or periodic increase in ambient noise levels in the vicinity of the project, in excess of noise levels existing without the project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e)	Be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport? If so, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f)	Be in the vicinity of a private airstrip? If so, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

DISCUSSION

- a) Construction noise levels at and near the planned project areas will fluctuate, depending on the type and number of construction equipment operating at any given time. There are no noise-sensitive human land uses located in the vicinity of the plan site that will be substantially affected by the proposed construction-related activities and no known noise standards applicable to this area (other than species-related noise restrictions - see Mitigation Measure Bio-3 for project constraints related to endangered and threatened species). However, depending on the specific construction activities being performed, short-term increases in ambient noise levels could result in speech interference near the project site. Implementation of the following

mitigations, in conjunction with BIO-3, will reduce the any potential adverse impacts to a less than significant level.

MITIGATION MEASURES NOISE-1

- | |
|---|
| <ul style="list-style-type: none">• Construction activities will generally be limited to the hours between 6 a.m. and 6 p.m.• Internal combustion engines used for any purpose at the job site will be equipped with a muffler of a type recommended by the manufacturer. Equipment and trucks used for construction will utilize the best available noise control techniques (e.g., engine enclosures, acoustically attenuating shields or shrouds, intake silencers, ducts, etc.) whenever feasible and necessary.• Stationary noise sources and staging areas will be located as far from sensitive receptors as possible. If they must be located near sensitive receptors, stationary noise sources will be muffled to the extent feasible and/or, where practicable, enclosed within temporary sheds. |
|---|

- b) The plan will not generate or expose people to excessive groundborne vibrations or groundborne noise levels because only a few relatively small pieces of heavy equipment will be operating at any one time. The sizes of the machines used will not generate excessive vibrations. No impact.
- c) Project-related noise will only occur during actual construction. Once construction is completed, all noise-generating equipment will be removed from the site. The plan will not create any source that will contribute to a substantial permanent increase in ambient noise levels in the vicinity of the project. No impact.
- d) See Discussion XI(a) above. No more than ten pieces of heavy equipment will be operating on this project at any one time throughout the park. The project sites will be closed to the public during construction and only construction workers will be affected by the equipment noise. Because the sites are primarily in thick second growth forests, noise travels only a short distance before it becomes muffled by vegetation and wind. The work sites are well away from campgrounds and visitor use areas. Because the equipment usually moves about 300 to 1000 feet per day, noise impacts will be transitory. Implementation of the mitigations indicated in Mitigation Measure BIO-3 and NOISE-1 will reduce any potential impacts to a less than significant level.
- e,f) The plan is not within an airport land use plan and is not within two miles of an airport or private air strip; therefore, the project will have no impact.

XII. POPULATION AND HOUSING

ENVIRONMENTAL SETTING

No housing exists within the plan area and no housing development is planned. The entire plan area is owned by State Parks.

Construction and State Park staff generally live in nearby Crescent City. Occasionally, contract workers may camp on-site during the construction phase in travel trailers. The trailers are required to be self-contained and are located on existing roads, landings, or other areas used by seasonal work crews.

WOULD THE PROJECT:	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

DISCUSSION

a,b,c) The plan will not induce substantial population growth because the plan does not involve housing or new businesses. The plan will be removing abandoned forest roads that are not used by the general public and will have no direct or indirect effect on population growth. The project will have no more than 15 employees working at one time during the summer months. No replacement housing will be required, because all workers already maintain housing in the region or provide their own temporary facilities. No people will be displaced because the plan only involves removal of abandoned logging roads that have no access or use by residences. All work will take place within the confines of the park boundaries, with no additions or changes to the existing local infrastructure. Therefore, the plan will have no impact on population growth or housing requirements in the area.

XIII. PUBLIC SERVICES

ENVIRONMENTAL SETTING

The watersheds proposed for rehabilitation are on steep hill slopes, covered in thick brush and second growth forest. The roads proposed for removal have been winterized prior to park acquisition by DPR and are covered with brush and impassable at many locations. Many of the stream crossings have failed during flood events and are impassable to vehicles and most hikers. Roads proposed for removal are not passable to fire suppression vehicles and will involve a much higher level of funding than is ever anticipated in any future DPR budget to re-open and maintain.

The NCRD maintains a network of service roads for use by fire suppression crews, ranger patrol, and for access to a few power lines traversing the park. These roads will eventually be reengineered as part of a yet undrafted comprehensive road management plan, to provide improved drainage and a hardened base. These roads are not included in this plan.

Conditions on the roads proposed for removal present a hazard to anyone who might attempt to hike the abandoned roads. Some portions of the roads remain in good condition and could attract visitors (once allowed into the park) into potentially dangerous areas. Access to these locations is difficult in an emergency.

Although there is no staff permanently assigned to this park, routine peace officer ranger patrols and road monitoring patrols do take place.

The California Department of Forestry and Fire Protection (CDF) provides fire protection for the project areas. CDF maintains a fire station in Crescent City, approximately 20 miles from the project location. The CDF Air Attack base is located in Rohnerville, approximately 50 air miles from the MCA.

No schools exist within the project area and the nearest school is over 10 miles away from the work sites, in Crescent City.

		<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
WOULD THE PROJECT:					
a)	Result in significant environmental impacts from construction associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Parks? <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

DISCUSSION

- a) Permanently closing and removing roads that are now overgrown with vegetation will reduce the potential for human-induced forest fires within the Park. A network of fire roads in the park will remain open to service and emergency vehicles only, and will be maintained in good travel condition. By removing features associated

with abandoned roads, such as cut-slopes and gullies, fire line construction in the event of a wildfire will be easier to plan and construct in locations desirable for the ideal layout. The CDF Air Attack Base in Rohnerville is approximately 50 air miles from the MCA, reducing response time in case of a fire. During the construction phase, DPR staff will have park radios on site at all times to ensure immediate direct contact to CDF fire dispatchers and crews. All heavy equipment and service vehicles will be required to carry fire extinguishers and fire suppression hand tools. (See Mitigation Measure HAZMAT-2.) . With the incorporation of Mitigation Measure Hazmat-2, the plan will have a less than significant impact on fire protection.

No additional demands on rangers or local police are expected as a result of this plan.

No schools exist within or adjacent to the project area. No changes will occur that would affect existing schools or require additional schools or school personnel. No impact.

Since no public use areas will be closed or access limited as a result of this plan, no other parks in the area should show a related increase in use. No adverse impact will occur at the MCA or any other public facilities as a result of this plan.

XIV. RECREATION

ENVIRONMENTAL SETTING

The MCA is not open to the public at this time. Occasional guided tours are provided to allow public access to the acquisition. Eventually the acquisition will be opened to the public for a variety of recreational uses. The areas that will be affected by the proposed plan are undeveloped, relatively inaccessible, and rarely used by visitors.

		<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
WOULD THE PROJECT:					
a)	Increase the use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b)	Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

DISCUSSION

a) The plan will not increase existing uses of the park, and will not accelerate the deterioration of any facility because the public will not use the roads proposed for removal. Nor will the project lead to increased use of other nearby facilities. No impact.

b) The plan does not include the construction of recreational facilities or the expansion of any facility; therefore, no impact will occur.

XV. TRANSPORTATION/TRAFFIC

ENVIRONMENTAL SETTING

The roads proposed for rehabilitation do not serve as transportation routes and have been private for over 40 years. Most are overgrown with brush and scattered small trees and many stream crossings are impassable. Numerous other stream crossings have already failed and large gullies exist along some of the roads. Landslides and other mass wasting have also blocked some of the roads.

All of the roads in this plan are abandoned and impassable to traffic. Childs Hill Road, Rock Creek Road, Bummer Lake Road, and West Branch Road provide access to the planned project areas and all areas of the Park.

		<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
Would the project:					
a)	Cause a substantial increase in traffic, in relation to existing traffic and the capacity of the street system (i.e., a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b)	Exceed, individually or cumulatively, the level of service standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c)	Cause a change in air traffic patterns, including either an increase in traffic levels or a change in location, that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d)	Contain a design feature (e.g., sharp curves or a dangerous intersection) or incompatible uses (e.g., farm equipment) that would substantially increase hazards?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e)	Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f)	Result in inadequate parking capacity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g)	Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

DISCUSSION

- a) The plan will not increase the traffic on any public street system. No impact.
- b) The plan will not cause traffic levels to exceed, individually or cumulatively, the level of service standards for designated roads or highways; the number of vehicles and frequency of travel related to this plan is insignificant. No impact.
- c) The plan sites are not located within an airport land use plan, within two miles of a public airport, or in the vicinity of a private air strip, and do not serve as a normal reporting point for air traffic in the area. Nothing in the proposed plan will in any way affect or change existing air traffic patterns; therefore, no impact will occur as a result of this plan.
- d) The plan does not contain a design feature or incompatible uses that will substantially increase traffic hazards. Roads proposed for removal have been closed for over 10 years and do not provide access to facilities,

recreation sites, utilities, or private land. None of the roads will be reopened as a result of this plan. No impact.

- e) The plan will not result in inadequate emergency access because the area served by the roads proposed for removal are already closed and inaccessible to emergency vehicles or are served by other routes such as Childs Hill Road, Rock Creek Road, West Branch Road, and Bummer Lake Road. The work will not disrupt normal emergency access to any portion of the park. No impact.
- f) The plan will not result in inadequate parking capacity because it does not involve public access or public uses. The construction workers on this project will park service vehicles close to the work site and move the vehicle down the road a few hundred feet every couple of hours as work progresses. No impact.
- g) The plan will not conflict with adopted policies, plans, or programs supporting alternative transportation because it does not reduce or increase transportation uses. No impact.

XVI. UTILITIES AND SERVICE SYSTEMS

ENVIRONMENTAL SETTING

The plan's roads do not contain any utilities or service systems. The area is a second growth forest in a remote wildland setting.

		<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
WOULD THE PROJECT:					
a)	Exceed wastewater treatment restrictions or standards of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b)	Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Would the construction of these facilities cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c)	Require or result in the construction of new storm water drainage facilities or expansion of existing facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Would the construction of these facilities cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d)	Have sufficient water supplies available to serve the project from existing entitlements and resources or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e)	Result in a determination, by the wastewater treatment provider that serves or may serve the project, that it has adequate capacity to service the project's anticipated demand, in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f)	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g)	Comply with federal, state, and local statutes and regulations as they relate to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

DISCUSSION

a-b) No wastewater will be produced by this plan. No impact.

c) The plan will not require or result in the construction of new stormwater drainage facilities or expansion of existing facilities because no stormwater facilities are needed. No impact.

d) No outside source of water is required during construction; therefore, no impact.

e-g) No impact; no wastewater or solid waste will be generated by this plan. Waste from construction workers will be deposited in existing facilities or hauled off site and disposed of in a facility designed for waste.

CHAPTER 4
MANDATORY FINDINGS OF SIGNIFICANCE

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
WOULD THE PROJECT:				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have the potential to eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means the incremental effects of a project are considerable when viewed in connection with the effects of past projects, other current projects, and probably future projects?)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Have environmental effects that would cause substantial adverse effects on humans, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

DISCUSSION

- a) The proposed plan was evaluated for potential significant adverse impacts to the natural environment. It has been determined that the proposed plan has the potential to temporarily degrade the quality of the environment and adversely affect special-status plant and animal species. The plan also has the potential to disrupt established drainage patterns; temporarily increase siltation, directional runoff, and erosion; and reduce the number of a special status plant. However, full implementation of all mitigation measures incorporated into this project will avoid or reduce these potential impacts to a less than significant level.
- b) The proposed plan has been evaluated for potential significant impacts to cultural resources. It has been determined that, with implementation of all proposed mitigation measures, no examples of significant cultural resources will be significantly impacted by the plan.
- c) Forest restoration work, primarily thinning of young, even-aged plantations, will be occurring concurrently with the implementation phases of this project. There is not likely to be any additional adverse impacts resulting from the combined effects of these two activities. There will be on-going coordination to ensure road re-contouring does not prematurely eliminate access to areas needing thinning. Road re-contouring may, in fact, benefit thinning work by providing fuel breaks in strategic areas.

Short-term increases in turbidity have been observed following crossing removal in other road removal projects conducted by State Parks (Klein, 2003). Increased turbidity results from mobilization of fine sediments unavoidably left in the channel following heavy equipment work. Minor adjustments in channel planform and longitudinal profile can also result in elevated turbidity. These effects, however, drop off sharply during the first winter following treatment and repeated field observations have indicated that by the end of the second winter season following treatment, turbidity increases through the treated sites are minimal (Klein, Pers. Comm, 2005). Given an increase in turbidity spanning two years, and a constant number of crossings treated each year, cumulative effects related to crossing removal level off in any given subwatershed after two

years. This occurs as older treatment sites yield less sediment and new sites begin contributing. Roads proposed for removal under this plan are widely distributed throughout the MCA. The roads occupy numerous un-named subwatersheds and represent only a fraction of the total road length in each subwatershed. Road treatments under this plan have been divided into 11 distinct treatment groups that are designed to minimize potential negative effects in any given subwatershed over the life of the plan. By spreading out road treatments cumulative effects in any given subwatershed are expected to be minimal. DPR also conducts routine maintenance of the road system in this park to reduce road related impacts to the environment. However, the limited mileage of grading that can be conducted each year and its wide distribution across the MCA is not expected to generate cumulative effects. Full implementation of all mitigation measures incorporated into this plan will reduce its impacts to a less than significant level. Impacts from environmental issues addressed in this evaluation do not overlap with additional planned projects in such a way as to result in cumulative adverse impacts that are greater than the sum of the parts. Less than significant impact.

- d) Most plan-related environmental effects have been determined to pose a less than significant impact on humans. However, possible impacts from construction accidents and fire (Hazards and Hazardous Waste), landslides and earthquakes (Geology and Soils), sedimentation (Water Quality), and noise, though temporary in nature, have the potential to result in significant adverse effects on humans. These potentially significant adverse impacts will be reduced to a less than significant level with the full implementation of all mitigation measures incorporated into this plan.

CHAPTER 5 SUMMARY OF MITIGATION MEASURES

The following mitigation measures will be implemented by DPR as part of the Landscape Stabilization and Erosion Prevention Plan in the MCA.

AIR QUALITY

MITIGATION MEASURES AIR-1

- All equipment engines will be maintained in good condition, in proper tune (according to manufacturer's specifications), and in compliance with all State and federal requirements.
- Traffic speed on unpaved roads will be limited to 15 miles per hour (mph).
- Excavation and grading activities will be suspended when sustained winds exceed 25 mph, instantaneous gusts exceed 35 mph, or when dust from construction might obscure driver visibility on public roads.
- No more than ten pieces of heavy equipment will operate at the sites at the same time. No more than ten service vehicles will enter the project site at one time.
- In areas where asbestos has been detected in concentrations greater than 1%, soil wetting will be used to suppress all visible dust. Soils will be maintained at a moisture level that will not generate dust. Soil wetting shall be conducted so as not to generate any surface runoff into watercourses. Water drafting will be conducted in accordance with the National Marine Fisheries Service, 2001 Water Drafting Guidelines. Access roads to the work site will be posted to alert drivers to the potential exposure to asbestos. All equipment will be rinsed of soil prior to leaving the asbestos containing work area to prevent track-out.

BIOLOGICAL RESOURCES

MITIGATION MEASURES BIO-1 (PLANTS)

1. Prior to operations surveys shall be conducted by a qualified botanist within the project boundaries (all areas of proposed operations and adjacent areas that could be impacted where sensitive plant habitat is present). Surveys shall be conducted in conformance with the DFG "Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities" (www.dfg.ca.gov/whdab/pdfs/guideplnt.pdf and Appendix D). Results of the survey effort shall be submitted to the Senior Resource Ecologist and the DFG at least 10 business days prior to commencing operations to allow sufficient time for review of the survey effort.
2. DPR's primary means of mitigation for plants listed as Rare, Threatened, and Endangered, or which occur on the CNPS Lists 1A, 1B or 2 shall be avoidance (see below). These measures are dependent on the species natural history and the potential for adverse affects or the potential for take. CNPS List 3 and 4 plants will be avoided when feasible; however, will not be required. DPR reserves the right to develop site specific measures in consultation with the DFG. Such measures will be amended into the MND.

Species Name	Common Name	Mitigation
		Wetland Shade Associated Species
<i>Lilium occidentale</i>	western lilly	A 75 foot equipment exclusion zone shall be established around plants or populations. Within this buffer the overstory canopy shall not be altered or removed nor shall the hydrology associated with the habitat be altered.
<i>Mitella caulescens</i>	leafy-stemmed miterwort	
<i>Pinguicula vulgaris</i> spp. <i>macroceras</i>	horned butterwort	
<i>Smilax jamesii</i>	English Peak greenbriar	
<i>Viola primulifolia</i> spp. <i>occidentalis</i>	western bog violet	
		Wetland Associated Species
<i>Carex leptalea</i>	flaccid sedge	A 25 foot equipment exclusion zone shall be established around plants or populations. The hydrology associated with this habitat shall not be altered.
<i>Carex praticola</i>	meadow sedge	
<i>Carex viridula</i> var. <i>viridula</i>	green sedge	
<i>Castilleja miniata</i> spp. <i>oregano</i>	Siskisyou indian paintbrush	
<i>Epilobium oreganum</i>	Oregon fireweed	
<i>Gentiana setigera</i>	Mendocino gentian	

<i>Lathyrus palustris</i>	marsh pea	
<i>Lewisia oppositifolia</i>	opposite-leaved lewisia	
<i>Montia howellii</i>	Howell's montia	
<i>Sagittaria sanfordii</i>	Sanford's arrowhead	
<i>Sanguisorba officinalis</i>	great burnet	
		Forest Shade Associated Species
<i>Asarum marmoratum</i>	marbled wild ginger	A 75 foot equipment exclusion zone shall be established around plants or populations. Within this buffer the overstory canopy shall not be altered or removed.
<i>Erythronium hendersonii</i>	Henderson's fawn lilly	
<i>Erythronium howellii</i>	Howell's fawn lilly	
<i>Monotropa uniflora</i>	indian-pipe	
<i>Saxifrage nuttallii</i>	Nuttall's saxifrage	
		Forest and Scrub Associated Species
<i>Arabis koehleri</i> var. <i>stipitata</i>	Koehler's stipitate rock cress	A 25 foot equipment exclusion zone shall be established around plants or populations.
<i>Arabis macdonaldiana</i>	McDonald's rock cress	
<i>Arienium trichomanes</i> ssp. <i>trichomanes</i>	maidenhair spleenwort	
<i>Arctostaphylos hispidula</i>	Howell's manzanita	
<i>Boschniakia hookeri</i>	small groundcone	
<i>Cardamine nuttallii</i> var. <i>gemmata</i>	yellow-tubered toothwort	
<i>Minuartia howellii</i>	Howell's sandwort	
<i>Pyrrocoma racemosa</i> var. <i>congesta</i>	Del Norte pyrrocoma	
<i>Senecio bolanderi</i> var. <i>bolanderi</i>	Seacoast ragwort	
<i>Sidalcea malachroides</i>	Maple-leaved checkerbloom	
<i>Sidalcea malviflora</i> spp. <i>patula</i>	Siskiyou checkerbloom	
<i>Sidalcea oregana</i> spp. <i>eximia</i>	Coast checkerbloom	
<i>Streptanthus howellii</i>	Howell's jewelflower	
<i>Thermopsis robusta</i>	Robust false lupine	

- Fens shall be provided with a minimum 25-foot equipment exclusion zone and the hydrology supporting the fens shall not be altered.

MITIGATION MEASURES BIO-2 (FISH)

- Stream crossing excavations will take place in dry channels or in channels where stream flow is diverted around the excavation sites. Excavations have been designed to limit negative effects on water quality to the maximum extent practicable.
- In some crossings, where the stream is flowing at a slow rate and cannot be captured and diverted, filter structures will be installed downstream to filter turbid discharge from the worksite. In other crossings, where flow is sufficient to be intercepted, a small diversion dam will be built upstream and stream flow piped around the worksite and discharged into the stream below the worksite.
- It is anticipated that most of the work will occur outside of the rainy season (June 1st to October 15th). On roads where potential sediment delivery to streams exists, construction activities after October 15th will proceed using conditions established by NOAA Fisheries during consultation for the Army Corps of Engineers permit obtained by DFG for this plan. This work will also be conducted in a manner consistent with conditions applied by NOAA Fisheries to similar projects located on nearby federal lands.
- If periods of dry weather are predicted after October 15th, small additional work items may be done with DFG approval, if they can be completed within the window of dry weather. DPR will have materials to sufficiently mulch bare work areas on-site at all times. Work will be conducted with weekly consultation with DFG

regarding weather forecasts and streamflow conditions. Work will be conducted so that no more than one-half day will be required to finish all earth moving and mulching work. All access roads will be winterized prior to any additional earth moving tasks.

- Streams and riparian zones will not be used as equipment staging or refueling areas. Equipment will be stored, serviced and fueled away from riparian areas. Heavy equipment will be cleaned (e.g., power washed, steam) prior to use below the ordinary high water mark.
- Any disturbed soil adjacent to stream channels will receive evenly distributed mulch coverage with masticated brush and trees to reduce sheet erosion. Coverage will be 80% adjacent to the stream or where no native mulch buffer exists between disturbed soil and a stream channel. Mulch will consist exclusively of native slash generated during the clearing phase of the rehabilitation work.
- DPR will ensure that contract(s) associated with the project contain all of the relevant BMPs, and other descriptions of sideboards and measures identified in this MND and in other documents associated with consultations for this project as necessary to avoid or minimize incidental take of SONCC coho salmon. If DPR determines that the contractor is not in compliance with the project contract, and non-compliance could result in greater effects than previously anticipated to SONCC coho salmon, DPR will cease and desist all operations and evaluate the contractor's performance. If the Contractor's performance cannot be corrected the contract will be terminated.

MITIGATION MEASURES BIO-3 (BIRDS)

- Generic Falconiformes and Strigiformes Mitigation Measures
 1. Pursuant to Fish & Game Code 3503.5 it is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto. Therefore prior to operations the DPR inspector shall be instructed in the identification of raptor nests (both occupied and unoccupied) and raptor breeding behavior by the District's Senior Resource Ecologist or his designee. During operations the inspector shall be responsible for assuring that no raptor nests are impacted by the proposed treatments by implementing the following measures:
 - a. If an unoccupied raptor nest is detected (during the generic critical period of January 15 through August 31, the nest tree and surrounding screen trees shall not be disturbed and the location shall immediately be reported to the Senior Resource Ecologist.
 - b. If an unoccupied raptor nest is detected outside of the generic critical period then operations shall cease in the vicinity of the nest and its location shall be reported immediately to the Senior Resource Ecologist. The Senior Resource Ecologist or his designee will then attempt to determine the species of raptor which constructed or used the nest and then the measures stated below under Item c will be applied (based on species).
 - c. If an occupied raptor nest is detected in the project area, then the DPR inspector will cease operations within ¼ mile of the raptor nest (unless it is known to be a peregrine falcon eerie then a 1 mile buffer shall be applied) and immediately notify the Senior Resource Ecologist. The Senior Resource Ecologist or his designee will then determine the species of raptor and then the following measures which were developed in concert with DFG (Scott Osborn, DFG pers comm. 04/13/05) will be applied (based on species).

Species¹	Critical Nesting Period	Temporal (Disturbance) Buffer	Spatial (Habitat) Buffer
Accipitridae			
Northern Goshawk	March 1 – August 31	400 m (0.25 mile)	50m (165 ft.)
Cooper's Hawk	March 1 – August 31	400 m (0.25 mile)	30 m (100 ft.)
Sharp-shinned Hawk	March 1 – August 31	400 m (0.25 mile)	30 m (100 ft.)
Osprey	February 15 – August 31	400 m (0.25 mile)	30 m (100 ft.)
Redtail Hawk		400 m (0.25 mile)	15 m (50 ft.)
Red-shoulder Hawk	February 1 – August 31	400 m (0.25 mile)	15 m (50 ft.)
Falconidae			
Peregrine Falcon	January 15 – August 31	1.6 km (1 mile)	150 m (500 ft.)
Strigiformes			
Great Horned Owls	February 1 – August 31	400 m (0.25 mile)	30 m (100 ft.)

¹ Mitigation measures for the northern spotted owl are covered above. Other species of raptors such as the golden eagle, northern harrier, bald eagle, or long-eared owl is not expected to occur within the project area due to lack of habitat and are therefore not addressed.

2. DPR reserves the right to consult with the DFG on site-specific and species-specific mitigation measures. Any such changes will be amended into the MND if necessary.

MITIGATION MEASURES BIO-4 (AMPHIBIANS)

- Large woody debris shall be incorporated back into restored water course channels by spanning across the channel a minimum of 1 tree ($\geq 12"$ dbh) per every 100 feet of restored channel. Each piece of wood shall be notched to a depth of at least 50% of the stem diameter to facilitate delivery to the channel. Preference will be given to the larger diameter stems. If sufficient material is available a stocking rate of 1 piece every 30-40 feet is preferred.
- Areas that provide potential habitat for the Del Norte salamander shall be identified and mapped prior to operations. Spatial buffers which retain the microhabitat of the sites shall be established around areas identified as potential habitat for the Del Norte salamander. The minimum buffer for these sites shall be 50 feet; however, site specific measures can be developed through consultation with the District's Senior Resource Ecologist provided that the measures are then amended into the MND.

MITIGATION MEASURES BIO-5 (TREES)

- Equipment operators shall be required to avoid striking retained trees to minimize damage to the tree structure or bark. Contract specifications shall establish fines for any damage to retained trees and fines shall be levied on the contractor for such damage.

MITIGATION MEASURES BIO-6 (RIPARIAN)

- Riparian reforestation utilizing the NCRD genetic integrity guidelines (Appendix E) shall be implemented within stream crossings and adjacent to watercourses. All disturbed areas within 30 meters of the channel centerline will be reforested with native species. Trees shall be planted on approximate 20-foot centers in a random distribution.
- Reforestation efforts shall be monitored during the second and third years (post-planting) to determine success of reforestation efforts. An 80% survivability rate shall be obtained. If the survival rate of the seedlings is less than 80% during the second or third year of monitoring then additional seedlings shall be planted to obtain the targeted success rate.

CULTURAL RESOURCES

MITIGATION MEASURES CULT-1

- Prior to any operations in a given area a qualified archaeologist shall conduct an investigation of the project area to determine the presence of any archaeological or historical resources (cultural resources). If a contractor is used then the contractor shall be required to first obtain a cultural investigations permit from the DPR Cultural Resource Program. A report documenting the location and type of any cultural resources determined shall be developed and submitted to the DPR Cultural Resource Program and the District's Senior Resource Ecologist. Based on the results of the report a 5024 shall be developed.
- The District's preferred method of addressing potential impacts to cultural resources is through avoidance. Therefore, if any cultural resources are detected as part of the investigation a minimum 25 foot equipment exclusion zone shall be established around the resource. The District reserves the right to alter this measure through the 5024 process.
- In the event that previously undocumented cultural resources are encountered during project construction (including but not limited to dark soil containing shellfish, bone, flaked stone, groundstone, or deposits of historic trash), work within the immediate vicinity (500 feet) of the find will be temporarily halted or diverted. Work would not continue at the site until a DPR-qualified cultural resource specialist evaluates the find and then designates and implements appropriate treatment and disposition of the artifact(s).
- If any significant cultural resources are found in a project location, a DPR-qualified historian, archaeologist and/or appropriate Native American Tribal representative will monitor any ground-disturbing work in that area from that point forward.

MITIGATION MEASURES CULT-2

- In the event that human remains are discovered, work shall cease immediately in the area of the find and the project manager/site supervisor will notify the appropriate DPR personnel. Any human remains and/or funerary objects shall be left in place or returned to the point of discovery and covered with soil. The DPR Sector Superintendent (or authorized representative) will notify the County Coroner, in accordance with §7050.5 of the California Health and Safety Code, and the Native American Heritage Commission (NAHC) or Native American Tribal representative. If a Native American monitor is on-site at the time of the discovery, the monitor will be responsible for notifying the appropriate Native American authorities.
- If the coroner or tribal representative determines the remains represent Native American interment, the NAHC in Sacramento and/or tribe will be consulted to identify the most likely descendants and appropriate disposition of the remains. Work shall not resume in the area of the find until proper disposition is complete (PRC §5097.98). No human remains or funerary objects will be cleaned, photographed, analyzed, or removed from the site prior to determination.
- If it is determined the find indicates a sacred or religious site, the site shall be avoided to the maximum extent practicable. Formal consultation with the State Historic Preservation Office and review by the NAHC/Tribal Cultural representatives shall also occur as necessary to define additional site mitigation or future restrictions.

GEOLOGY AND SOILS

MITIGATION MEASURES GEO-1

- All workers shall be advised of high-risk areas and cautioned to use extreme care while working in those areas.
- All heavy equipment operators shall be required to have experience working in conditions similar to the proposed project.
- A qualified inspector, trained in landform rehabilitation, shall monitor equipment operation.
- Hand crews or other workers on the ground will be required to position themselves upslope of sites where excavations are actively under construction.
- Heavy equipment operators shall be cautioned to minimize their exposure to unstable slopes that may occur naturally or result from the earthmoving process. Inspectors shall continually evaluate slope geometry and caution operators if unstable conditions are indicated.

HAZARDS AND HAZARDOUS MATERIALS

MITIGATION MEASURES HAZMAT-1

- All equipment will be inspected for leaks immediately prior to the start of construction, and regularly inspected thereafter until equipment is removed from park premises. Leaks that develop will be repaired immediately in the field or work with that equipment will be suspended until repairs could be made.
- The contractor(s) will prepare an emergency spill response plan prior to the start of construction. DPR will ensure that the contractor maintains a spill kit on-site throughout the life of the project, or provides multiple sets of cleanup materials to each crew, if sharing will prevent timely implementation of cleanup plans. In the event of any spill or release of any chemical in any physical form on or immediately adjacent to the project sites or within the MCA during construction, the contractor will immediately notify the appropriate DPR staff (e.g., project manager or supervisor). Appropriate agencies will be notified in the event of significant spillage.
- No maintenance or fueling activities shall be permitted within 200 feet of a stream.
- Equipment will be cleaned and repaired (other than emergency repairs) outside the park boundaries. All contaminated water, sludge, spill residue, or other hazardous compounds will be disposed of outside park boundaries, at a lawfully permitted or authorized designation.

MITIGATION MEASURES HAZMAT-2

- If there is evidence of spillage from or free product discovered on or adjacent to the project sites, work will be halted or diverted from the immediate vicinity of the find and the Sector's hazardous materials coordinator will be contacted. Hazardous materials, if present, will be contained and removed from the site prior to resumption of work. Removal of all contaminants, including sludge, spill residue, or containers, will be conducted following established DPR procedures and in compliance with all local, state, and federal regulations and guidelines regarding the handling and disposal of hazardous materials.

MITIGATION MEASURES HAZMAT-3

- A fire safety plan will be in place prior to the start of any construction, including availability of identified fire suppression equipment and any required employee training.
- Spark arrestors or turbo-charging (which eliminates sparks in exhaust) and fire extinguishers will be required for all heavy equipment.
- Construction crews will be required to park vehicles away from flammable material such as dry grass and brush. At the end of each workday, heavy equipment will be parked over mineral soil to reduce the chance of fire. All equipment will be required to be mechanically sound and free of flammable debris.
- Park staff will be required to have a State Park radio on site, which allows direct contact to California Department of Forestry and Fire Protection and centralized dispatch center, to facilitate the rapid dispatch of control crews and equipment in case of a fire.

HYDROLOGY AND WATER QUALITY

MITIGATION MEASURES HYDRO-1

- Cutbanks exposing seeps or springs will not be recontoured. Instead, the embankment fill adjacent to the wet area will be exported to nearby dry sections of the road. An outsloped cutbench will extend along all wet road sections. No vegetation will be removed within 25 feet of a spring that emanates from a cut slope.
- If a long section of road were not suitable for full recontouring, the excavator will remove the embankment fill and load it into a dump truck to be end-hauled to a stable location on a nearby site proposed for recontouring. The excavator and dozer will recover the entire embankment fill and outslope the cutbench of the road. On steep linear road grades, broad swales will be constructed along the road at appropriate locations to convey flow into natural drainage features below the road.
- Road sections immediately adjacent to stream crossings will not be fully recontoured. Instead, the fill will be tapered toward the crossing and the cutbank laid back to a more stable slope. This reduces the slope on each side of the crossing, decreasing the chance for direct sediment delivery if a post-treatment slope failure should occur.
- If the stream has running water, it will be diverted away from excavation areas to reduce turbidity and returned to the channel immediately downstream. Where channel widths are wide enough, a berm will be constructed to divert water away from the work area. Where channels are narrow, a small diversion dam will be built upstream and stream flow piped around the worksite and discharged into the stream below the worksite. Instream filters will be installed where diversion is not possible. The project inspector will carefully monitor the structures to prevent failures.
- If the crossing has already partially failed, a small road bench will be reconstructed along the upstream end of the crossing to allow access to both sides of the crossing. A minimal amount of fill will be used and streamflow (if present) piped around the site or a culvert installed to convey streamflow under the temporary road.
- Logs and rocks will not be placed in the excavated channel because they cause lateral migration resulting in bank erosion. Instead, logs will be placed on the channel margins or span the removed crossing.
- All temporary berms, ponds, and piping will be completely removed at the completion of construction.

MITIGATION MEASURES HYDRO-2

- Following October 15th of any work year, any roads remaining open to service vehicles will be winterized by installing rolling dips at all stream and swale crossings; portions of the outside berm will be removed to allow drainage and any unstable fill will be pulled back from stream crossings.
- Following October 15th of any work year, work will not proceed in any area where soils have become saturated. Construction work will generally be limited to the dry periods of the year, when rain is unlikely.
- All stream crossing sites will be photo-documented following treatment to enable rough-estimate, quantitative assessment of post-treatment adjustments. All stream crossing sites will be reviewed in the field during the first winter following treatment to identify any deficiencies in treatment or treatment techniques.

NOISE

MITIGATION MEASURES NOISE-1

- Construction activities will generally be limited to the hours between 6 a.m. and 6 p.m.
- Internal combustion engines used for any purpose at the job site will be equipped with a muffler of a type recommended by the manufacturer. Equipment and trucks used for construction will utilize the best available noise control techniques (e.g., engine enclosures, acoustically-attenuating shields or shrouds, intake silencers, ducts, etc.) whenever feasible and necessary.

- Stationary noise sources and staging areas will be located as far from sensitive receptors as possible. If they must be located near sensitive receptors, stationary noise sources will be muffled to the extent feasible and/or, where practicable, enclosed within temporary sheds.

Chapter 6

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Internet Resources

Best Management Practices for Road Removal, North Coast Redwoods District – California State Parks can be found at: www.parks.ca.gov

Water Drafting Specifications (2001). National Marine Fisheries Service, found at <http://swr.nmfs.noaa.gov/hcd/WaterDrafting-02.htm>

REPORT PREPARATION

CALIFORNIA DEPARTMENT OF PARKS AND RECREATION

John E. Harris

Senior Resource Ecologist
North Coast Redwoods District
P.O. Box 2006
Eureka, CA 95502

Brian R. Merrill

Engineering Geologist
North Coast Redwoods District
P.O. Box 2006
Eureka, CA 95502

